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General Assembly

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Committee on the Peaceful Uses of Outer Space
Legal Subcommittee
Fortieth session
Vienna, 2-12 April 2001

Provisional agenda[1]

1. Opening of the session, election of the Chairman and adoption of the agenda.
2. Statement by the Chairman.
3. General exchange of views.
4. Status and application of the five United Nations treaties on outer space.
5. Information on the activities of international organizations relating to space law.
6. Matters relating to:
   (a) The definition and delimitation of outer space;
   (b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union.
7. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.

[1] In paragraph 5 of its resolution 55/122 of 8 December 2000, the General Assembly endorsed the recommendation of the Committee on the Peaceful Uses of Outer Space that the Legal Subcommittee, at its fortieth session, taking into account the concerns of all countries, in particular those of developing countries, should consider items 3, 4, 5 and 6 as regular items of the agenda, should consider items 7 and 8 as single issues and items for discussion and should consider item 9 in accordance with the work plan adopted by the Committee. In paragraph 6 of the same resolution, the Assembly noted that the Subcommittee, at its fortieth session, would submit proposals to the Committee for new items to be considered by the Subcommittee at its forty-first session, in 2002.

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8. Consideration of the draft convention of the International Institute for the Unification of Private Law (Unidroit) on international interests in mobile equipment and the preliminary draft protocol thereto on matters specific to space property.

9. Review of the concept of the "launching State".

10. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its forty-first session.

Annotations

1. Opening of the session, election of the Chairman and adoption of the agenda

At its fortieth session, in 1997, the Committee on the Peaceful Uses of Outer Space reached an agreement on the composition of the bureaux of the Committee and its subsidiary bodies.[2] In accordance with that agreement, at its forty-third session, in 2000, the Committee agreed that Vladimir Kopal (Czech Republic) should be elected Chairman of the Legal Subcommittee for the next three-year term, from 2001 to 2003.[3]

4. Status and application of the five United Nations treaties on outer space

At its thirty-ninth session, in 2000, the Legal Subcommittee agreed that discussion under this item would include the status of the treaties, review of their implementation and obstacles to their universal acceptance (A/AC.105/738, para. 111).

5. Information on the activities of international organizations relating to space law

In the discussion of this item, member States may bring to the attention of the Legal Subcommittee any information on the activities of international organizations relating to space law. In accordance with the agreement reached at the thirty-ninth session of the Legal Subcommittee, international organizations were invited to report to the Subcommittee on their activities.

6. Matters relating to:

(a) The definition and delimitation of outer space

(b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union

In paragraph 4 of its resolution 55/122, the General Assembly noted that, in accordance with the agreement reached by the Legal Subcommittee at its thirty-ninth session on the question of the character and utilization of the geostationary

[2] *Official Records of the General Assembly, Fifty-second session, Supplement No. 20* (A/52/20), annex I, para. 2.

[3] Ibid., *Fifty-fifth session, Supplement No. 20* (A/55/20), para. 12.

orbit, the Legal Subcommittee would reconvene its working group on the item only to consider matters relating to the definition and delimitation of outer space.

8. Consideration of the draft convention of the International Institute for the Unification of Private Law (Unidroit) on international interests in mobile equipment and the preliminary draft protocol thereto on matters specific to space property

At its forty-third session, the Committee on the Peaceful Uses of Outer Space agreed that this item would be included in the agenda of the Legal Subcommittee at its fortieth session, in 2001, as a single issue/item for discussion.[4]

9. Review of the concept of the "launching State"

In paragraph 8 of its resolution 55/122, the General Assembly noted that the Legal Subcommittee would reconvene its working group to consider this item.

In accordance with the work plan adopted by the Committee on the Peaceful Uses of Outer Space at its forty-second session, in 1999, this item will be considered by a working group during a three-year period beginning in 2000. In 2001, the Subcommittee will review the concept of the "launching State" as contained in the Convention on International Liability for Damage Caused by Space Objects and the Convention on Registration of Objects Launched into Outer Space as applied by States and international organizations.[5]

[4] Ibid., para. 166.

[5] Ibid., *Fifty-fourth Session, Supplement No. 20* (A/54/20 and Corr.1), para. 114.

Annex

Organization of work

1. At its thirty-ninth session, in 2000, the Legal Subcommittee agreed that a flexible organization of work should continue to serve as the basis for organizing its work with a view to making fuller use of the conference services available (A/AC.105/738, para. 9).

2. At its thirty-ninth session, in 1996, the Committee on the Peaceful Uses of Outer Space agreed that the practice of allocating specific agenda items to particular meetings at a session should be ended and that, to assist in their planning, member States would continue to be provided with an indicative schedule of work, which would be without prejudice to the actual timing of consideration of specific agenda items.[a] The Committee also agreed that agenda items should be considered consecutively and be considered closed after the list of speakers on any particular item had been exhausted and that the Chairman might propose that items be suspended to allow additional discussion at future meetings.[b]

3. At the close of the afternoon meeting on 2 April 2001, a symposium on methods of peaceful settlement of space law disputes, sponsored by the International Institute of Space Law and the European Centre for Space Law, will be held.

4. An indicative schedule of work is given below.

Indicative schedule of work

Date	*Morning*	*Afternoon*
Week of 2-6 April 2001		
Monday, 2 April	Item 1. Opening of the session, election of the Chairman and adoption of the agenda Item 2. Statement by the Chairman	Item 3. General exchange of views
	Item 3. General exchange of views	Symposium on methods of peaceful settlement of space law disputes
Tuesday, 3 April	Item 3. General exchange of views Item 4. Status and application of the five United Nations treaties on outer space	Item 4. Status and application of the five United Nations treaties on outer space
Wednesday, 4 April	Item 5. Information on the activities of international organizations relating to space law	Item 5. Information on the activities of international organizations relating to space law

[a] *Official Records of the General Assembly, Fifteth Session, Supplement No. 20* (A/50/20), para. 169 (b).

[b] Ibid., para. 169 (c).

Date	*Morning*	*Afternoon*
Thursday, 5 April	Item 6 (a) The definition and delimitation of outer space	Item 6 (a) The definition and delimitation of outer space
	Item 6 (b) The character and utilization of the geostationary orbit	Item 6 (b) The character and utilization of the geostationary orbit
Friday, 6 April	Item 7 Nuclear power sources	Item 7 Nuclear power sources
Week of 9-12 April 2001		
Monday, 9 April	Item 8 Consideration of the draft Unidroit convention and the draft protocol thereto	Item 8 Consideration of the draft Unidroit convention and the draft protocol thereto
Tuesday, 10 April	Item 9 Review of the concept of the "launching State"	Item 9 Review of the concept of the "launching State"
Wednesday, 11 April	Item 10 Proposals to the Committee on new agenda items	Item 10 Proposals to the Committee on new agenda items
Thursday, 12 April	Adoption of the reports of the working groups on the definition and delimitation of outer space and on the review of the concept of the "launching State"	Adoption of the report of the Legal Subcommittee

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Committee on the Peaceful Uses of Outer Space
Legal Subcommittee
Fortieth session
Vienna, 2-12 April 2001
Item 5 of the provisional agenda*
Information on the activities of international organizations relating to space law

Information on the activities of international organizations relating to space law

Note by the Secretariat**

In accordance with the agreement reached at the thirty-ninth session of the Legal Subcommittee (A/AC.105/738, para. 28), and endorsed by the Committee on the Peaceful Uses of Outer Space at its forty-third session,[1] the Secretariat invited international organizations to submit reports on their activities relating to space law for the information of the Subcommittee. The present document contains a compilation of the reports received by 19 January 2001.

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* A/AC.105/C.2/L.222.

** The present document contains replies received from international organizations by 19 January 2001. The replies are being reproduced in the form in which they were received and have not been formally edited.

[1] *Official Records of the General Assembly, Fifty-fifth Session, Supplement No. 20* (A/55/20), para. 126.

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European Centre for Space Law

[Original: French]

(The report presented in 2000 includes the Centre's charter.)

The European Centre for Space Law (ECSL) continued its task of developing and promoting knowledge and study of space law in Europe. The year 2000 produced good results for the Centre and a number of its activities were successfully completed, including the following:

1. Manfred Lachs Space Law Moot Court Competition

Special mention should be made this year of the European team, which won the finals of the Manfred Lachs Space Law Moot Court Competition. ECSL had organized the European preliminaries. In this competition, run by the International Institute of Space Law (IISL), finalists from America, Europe and Australasia are judged by three members of the International Court of Justice.

This year's finals took place in Rio de Janeiro during the IISL annual conference and was presided over by Judge Gilbert Guillaume, President of the International Court of Justice.

The finals were won by the team from the University of Paris IX. Apart from offering continual assistance to the teams during their preparations, ECSL also assumed the travel and accommodation costs for the European finalists.

2. Summer course in space law and policy

ECSL organized its ninth summer course on space law and policy in collaboration with the Institute of Air and Space Law of the University of Cologne in Germany.

Once again, 40 students from a dozen European universities enjoyed two weeks of intensive courses on space law and applications. This year the focus was on legal aspects of the commercialization of the ISS and included the negotiation and drafting of a fictional operating contract. The students were highly motivated and some of them, after this introduction to space law, decided to continue in this direction and to write doctoral theses at their respective universities.

3. Practitioners' Forum

This event is aimed more at space law professionals (lawyers, corporate legal experts, etc.) and takes the form of an annual review of the latest developments in space law.

This year the meeting was devoted in its entirety to a presentation of the draft space protocol and the draft Unidroit convention, under consideration in the legal subcommittee. ESCL closely monitored the various meetings organized by Unidroit and was present, in particular, at the meeting held in Rome in October 2000.

This meeting gave practitioners an opportunity to gain a deeper insight into the stakes involved in and the problems raised by the draft protocol; the different

sectors concerned (banks, insurance, finance, industry, operators, etc.) presented their points of view. In organizing this comprehensive presentation of the draft, ESCL was hoping to establish a common position among the Member States.

1. Miscellaneous

ESCL worked at strengthening inter-university relations and encouraged the teaching of space law in Europe. An MA programme in air and space law was introduced this year at the University of Leiden (Netherlands), and a postgraduate programme in space and telecommunications law is currently being set up at the University of Paris IX.

ESCL has helped its national contact points to organize legal symposiums.

Finally, ESCL continues to publish the ESCL Newsletter, which has a wide international circulation.

European Space Agency

[Original: French]

The European Space Agency continues to attach considerable importance to the development and promotion of space law, be it through the conclusion of cooperation agreements or the adoption of legal measures. For this purpose (see report presented in 2000) the Council is assisted by a subsidiary body, the International Relations Committee (IRC), where questions relating to space law are discussed.

A particularly wide range of activities was scheduled for the year 2000, including the following:

1. Additional Declaration to the Convention on International Liability for Damage Caused by Space Objects

The Additional Declaration concerns the binding recognition (subject to reciprocity) of awards by the Claims Commission established under the Convention. It was adopted by the ESA Council on 21 June 2000 (text attached).

2. Space debris

This question was considered not only from a legal point of view but also at a technical level. ESA is a member of the Inter-Agency Space Debris Coordination Committee (IADC) and sits on the scientific and technical subcommittee of the plenary committee (the Third European Conference on Space Debris will take place at the European Space Operations Centre (ESOC) in Darmstadt, Germany, from 19 to 21 March 2001).

At the recommendation of the IRC, the ESA Council passed an important resolution on European policy with regard to space debris at its meeting in December 2000.

The Agency also helps coordinate the facilities available in Europe for monitoring space debris.

3. Other matters

The Agency has kept the IRC informed of the work of the International Institute for the Unification of Private Law (Unidroit) on its draft convention on international interests in mobile equipment and the preliminary draft protocol thereto on matters specific to space property. Mention should also be made of the report "The Ethics of Space Policy", published by UNESCO with the assistance of ESA in July 2000. The Agency is also presenting a working document on the concept of "launching State" for the corresponding working group of the subcommittee.

Finally, the Code of Conduct for astronauts at the International Space Station (ISS) has been approved, in particular by the Governments of ESA Member States participating in the ISS programme. The Station's operational phase, which is likely to raise a number of complex legal questions (liability for damage, intellectual property rights, litigation, etc.), is currently being considered.

International Institute of Space Law

[Original: English]

REPORT ON THE ACTIVITIES OF THE INTERNATIONAL INSTITUTE OF SPACE LAW*

INTRODUCTION

The International Institute of Space Law (IISL) was founded by the International Astronautical Federation (IAF) in 1960 with the purpose of carrying out activities for fostering the development of space law and studies of legal and social science aspects of the exploration and use of outer space. The IISL presently has individual and institutional elected members from over 40 countries, who are distinguished for their contributions to space law development. As the IAF is an officially recognised observer at sessions of the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS) and its Scientific & Technical and Legal Subcommittees, members of the IISL are entitled to be designated as IAF observers to those sessions.

RECENT ACTIVITIES

1. Participation in the UNISPACE III Conference

During the Third United Nations Global Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III), held in Vienna in July 1999, at the

* The draft of this report was prepared by a Member of the Board of Directors of the IISL, Dr. Ram Jakhu, and was approved by the President.

invitation of the United Nations, the IISL organised a four-day workshop from 20 to 24 July 1999. A report containing the recommendations of the Workshop were forwarded to the Intergovernmental Conference and the Conference, after consideration, adopted most of its recommendations which are now contained in the report adopted by the Conference, and endorsed by the United Nations General Assembly, which is to be found at http://www.un.or.at/OOSA.

2. The 43rd IISL Colloquium on the Law of Outer Space in Rio de Janeiro, Brazil

The 43rd Colloquium on the Law of Outer Space was organised from 2 to 6 October 2000 in Rio de Janeiro, Brazil. Of 55 accepted papers, 45 were presented at the following four sessions: (1) Law and Ethics of Space Activities in the New Millennium, (2) State Responsibility and Liability for Non-State Space Activities, (3) The Interrelation between Public International Law and Private International Law in the Regulation of Space Activities, and (4) Other Legal Matters, including Recent Developments in the Regulation of Space Debris, the Exploitation of Non-Terrestrial Resources, and the Implications of Proposed Missile Defence Systems. The IISL for the first time organised a Plenary Event, on the topic of "Making Space Profitable, Roles of Law and Policy". The speakers that made presentations at this event were from NASA, ESA, WorldSpace, Mansat, Space Policy Institute, and SpaceImaging. In the future, similar activity might remain on the Agenda for IISL in the form of a Plenary Event or an additional (fifth) IISL session, in order to discuss issues that would widen the reach of space law to engineers, scientists etc.

On a proposal by Prof. Fernandez Brital (Argentina), the IISL has established a new award to be known as "Dr. I.H.Ph. Diederiks-Verschoor Award". This award will be granted to the best paper presented at the IISL Colloquium by authors, under the age of 40 years, who submit papers for the first, second or third time, as a means to promote young lawyers. The award could be granted for the first time in Toulouse, France, in 2001.

3. The 9th Manfred Lachs Space Law Moot Court Competition

In 2000, a new round of this Competition for the Australasian region was held, in addition to the preliminaries in Europe and the USA. The National University of Singapore won that round and participated in the semi-final against the USA, which the latter won. The finals of the 9th Manfred Lachs Space Law Moot Court Competition (Homeria v. San Marcos) were held in Rio de Janeiro, Brazil, on 5 October 2000 at the First Court of Justice of Rio, between Hamline University (USA) as Applicant and the University of Paris XI (France) as Respondent. President Guillaume, Judge Rezek and Judge Vereshchetin of the International Court of Justice judged the finals, which were won by the University of Paris XI. The "Best Oralist" award was won by Allen Blair of the USA, and the new "Eilene M. Galloway Award for Best Brief", consisting of a certificate and a sum of money, was won by the Applicant from the University of Paris XI. A reception and dinner were hosted by the Local Organising Committee at the beautiful Palacio da Cidade. Around 130 guests attended, and Dr. Antonio Guerreiro, head of the Division of Special Themes at the Brazilian Ministry of External Relations gave a dinner speech.

The IISL wishes to expand the competition to Latin America and other regions and efforts will continue in that direction.

4. New Mission for the IISL

In the spirit of UNISPACE III requesting NGO's to take an active part in the work of the UN and on a proposal by Dr. Schrogl, the IISL has decided to play a more active role in formulating proposals and issuing position papers in order to make contribution to the further development of space law. A task force has been set up to work out the details of how to implement this decision.

5. Participation in the UNIDROIT Meetings

Several members of the IISL participated in the two recent meetings organised by UNIDROIT which dealt with the development of the Space Protocol to the proposed Convention on International Interests in Mobile Equipment. Main issues discussed were the definition of space property and remedies for default, how to seize control space property, and the role of COPUOS. The revised version of the Space Protocol will be discussed by COPUOS as a single issue item at its April 2001 meeting. The UNIDROIT Council will consider it at its September 2001 session and probably will authorize Government meetings for convening a diplomatic conference on the Space Protocol at the end of 2003. The IISL might include this item in briefing to the COPUOS Legal Subcommittee on current legal issues.

6. Co-operation with other organisations

Co-operation with other organisations has been continued, among others, with the United Nations COPUOS, the European Space Agency (ESA), the European Centre for Space Law (ECSL), the International Law Association (ILA), the International Bar Association, and several national institutions and universities. The IISL Standing Committee on the Status of International Agreements relating to Activities in Outer Space continued its useful work. The reports of this committee are published in the Proceedings of the IISL Colloquia on the Law of Outer Space. The IAF was represented at the Legal Subcommittee meeting of the UN Committee on the Peaceful Uses of Outer Space in Vienna, from 27 March to 7 April 2000, by Prof. E. Back Impallomeni, Dr. E. Fasan and Ms. R.M. Ramirez de Arellano y Haro. Prof. E. Back Impallomeni, Dr. S.E. Doyle and Mr. Yara Arvide served as official IAF observers at the Plenary COPUOS session in Vienna from 7 to 16 June 2000.

7. Award in Rio de Janeiro

In Rio de Janeiro, a Distinguished Service Award was given to Dr. Skip Smith (USA) for his continuing work in making the Manfred Lachs Space Law Moot Competition ever more successful since it was first held in 1992.

8. Publications

The Proceedings of the 42nd IISL Colloquium (Amsterdam, 1999) were published by the American Institute of Aeronautics and Astronautics (AIAA) in

July 2000. The first three volumes of the IISL Colloquium Proceedings were re-published some years ago with the help of the United Nations Office for Outer Space Affairs. "Space Law: A Bibliography", a cumulative index of the proceedings of the IISL Colloquia from 1958 until 1994, has been published in June 1996 as a co-operative effort between the IISL and the UN Office for Outer Space Affairs.

FUTURE ACTIVITIES

1. A Regional Space Law Conference in March 2001 in Singapore

A regional conference for the Asia Pacific region on the general theme of "Space Law Conference 2001: Legal Challenges and Commercial Opportunities for Asia" will be organised from 11-13 March 2001 in Singapore, in co-operation with the Society for International Law, Singapore (SILS). This is the first event in a series of regional meetings the IISL intends to organise. A variety of papers will be presented and discussed at the following five sessions: (1) Space Law and the Expanding Role of Private Enterprise, with Particular Attention for Launching Activities, (2) Safeguarding the Concept of Public Service in View of Increasing Commercialisation and Privatisation of Space Activities, with Particular Attention to the Global Public Interest & the Needs of Developing Countries, (3) The Legal Regulation of Remote Sensing in View of the Commercial Availability of Very High Quality Remote Sensing Imagery; the Need to Safeguard the Right to Privacy and the Principle of Non-discriminatory Access to Data, (4) The Development of Effective Mechanisms for the Settlement of Disputes Arising in Relation to Space Commercialisation, Taking into Account Existing Arbitration Rules Used in International Practice for Dispute Settlement, and (5) Legal Issues of Expanding Global Satellite Communications Services and Global Navigation Satellite Services, with Special Emphasis on the Development of Telecommunications and E-Commerce in Asia. In addition, there will be a keynote speech on "An Overview of the Major Legal Challenges Facing Space Activities in the 21st Century" by Dr. Nandasiri Jasentuliyana, (President, International Institute of Space Law, Former Director, UN Office of Outer Space Affairs), a luncheon speech on "The Possibility of Establishing an Asian Space Agency" by Prof. Doo Hwan Kim, (Honorary President, The Korean Association of Air and Space Law, Seoul, Korea) and another luncheon speech on "The ITU in the 21st Century" by Dr. Alfons Noll (Former Legal Adviser, International Telecommunication Union, Geneva, Switzerland).

The Singapore Conference hopes to assemble 150 participants from the Asia Pacific region and the rest of the world, and will also host the Australasian round of the Manfred Lachs Space Law Moot Court Competition.

2. The 44th Colloquium on the Law of Outer Space in October 2001 in Toulouse, France

The 44th Colloquium on the Law of Outer Space will be held in Toulouse, France, from 1 to 5 October 2001 on the general theme of "Emerging Legal Issues in Space Activities". There will be four sessions on the following topics: (1) Emerging issues of interpretation and application of space treaties (including definitional issues of state responsibility, launching states, space objects and related legal issues), (2) Emerging legal issues in satellite telecommunications (with special

attention for the national regulation of mobile satellite systems, including national licensing requirements, WTO agreements, ITU and GMPCS, private national entities operating on a global level, ownership of telecom service providers, principle of global (universal) telecom service, radio frequency management, need for an international independent telecom regulator, (3) Legal issues arising from the commercial availability of high quality remote sensing imagery (topics will include the extent to which such imagery can be admitted as evidence in civil and criminal cases; what legal requirements must be established to guarantee that such digital data used in legal proceedings are unaltered; the extent to which such data can be used to mediate international disputes; and what personal and corporate rights of privacy exist with regard to the acquisition and dissemination of such data), and (4) Other Legal Matters, including, the teaching of space law at the dawn of the new millennium, space debris, conflicts relating to space activities, legal aspects of human habitations in outer space, and emerging legal issues in the field of navigation by satellite.

3. The 10th Manfred Lachs Space Law Moot Court Competition in Toulouse, France

The semi-finals and finals of the 10th Manfred Lachs Space Law Moot Court Competition will be held during the 2001 Colloquium in Hôtel-Dieu St Jacques, in Toulouse, France, on The Case Concerning Access To ESI-1 Data, Soliscalor v. Cornucopia, written by F. von der Dunk. The preliminaries will be held in Europe, the USA and Australasia. The French Association for Air and Space Law (SFDAS) and the French Society for the Development of Space Law (ADDEF) will co-host an event for the IISL. The ESA, ECSL and ISU may also make special contributions.

4. COPUOS programme

The IISL has been requested again to organise a Symposium for the delegates and staff of the Legal Subcommittee of the COPUOS session in 2001 on the subject of "Dispute Settlement Mechanisms". Dr. E. Fasan will be the co-ordinator for this Symposium.

5. Publications

The Proceedings of the 43rd Colloquium on the Law of Outer Space (Rio) will be published by the AIAA.

The IISL will continue to prepare material for the United Nations annual review of developments in international co-operation and space law "Highlights in Space". The IISL contribution to "Highlights in Space" will be written by Dr. Doyle.

A new edition of the History of the International Institute of Space Law is being prepared by Dr Doyle and is expected to be completed soon.

International Law Association

Space Law Committee

[Original: English]

A. General Information

The Space Law Committee of the International Law Association has been reporting to the COPUOS every year on the progress of its work. Following our last presentation to the 39th Session of the Legal Subcommittee of COPUOS, held between 27 March-6 April 2000 in Vienna,[2] we are now pleased to report on further developments concerning the ILA Space Law Committee's task.

A more detailed source of information is contained in the ILA Conference Reports, published in book format shortly after each biennial Conference. These Conference Reports reflect the work carried out by the Space Law Committee, including reports, questionnaires to members and answers thereto, as well as a summary of the debates taking place at the Working Sessions of the Conference. In addition, the Reports carry the resolutions adopted at each Conference by the Plenary Session containing, inter alia, the terms of reference for the Committee's future work.

The Space Law Committee of the ILA is chaired by Professor Karl-Heinz Böckstiegel (German Branch), and Professor Maureen Williams (HQ Branch Argentina) is the Committee's Rapporteur. Its members are specialists of note, many of whom are well known to members of the COPUOS and its Legal Subcommittee, among which mention should be made of Prof. Vladimir Kopal, present chairman of the Legal Subcommittee of COPUOS, Dr. Nandasiri Jasentuliyana, former Director of the UN Outer Space Affairs Office, and Professors Sir Robert Jennings and Gilbert Guillaume, past and present presidents, respectively, of the International Court of Justice.

A long-standing tradition of our Committee is the interdisciplinary approach to our work. Thusfar we been assisted by Prof. Dr. Dietrich Rex (Germany), Prof. Lubos Perek (Czech Republic) and Prof. Eng. Humberto Ricciardi (Argentina). The latter, a well-known scientist within the United Nations Space Programme during the sixties, regrettably passed away on 23 September 2000 which is a great loss for the ILA Space Law Committee.

B. Topics On The Agenda Of The ILA Space Law Committee

The following topics are currently being considered by our Committee:

1. Review of the Space Law Treaties in View of Commercial Space Activities
2. Dispute Settlement related to Space Activities, and
3. Space Debris

[2] Doc. A/AC.105/C.2/2000/CRP.4, 22 March 2000.

Within the context of this Report attention will be focussed on the first of the subjects listed, given its closeness to one of the items presently on the agenda of the Legal Subcommittee entitled "Review of the status of the five international legal instruments governing outer space". Insofar as topics 2 and 3 are concerned, reference is hereby made to our presentation to the 43rd Session of COPUOS (7-16 June 2000, Vienna) where an extensive account of both these subjects –kept under permanent study by the ILA Space Law Committee- may be found. Therefore, only a short paragraph on each of these topics will be included at the end of the present report.

1. Review of the Space Treaties in View of Commercial Space Activities

As announced in our last report to COPUOS, written just under a year ago, the ILA Space Law Committee reported on the results of its studies on the subject of reference to the 69th Conference of the International Law Association held in London in July 2000.

Let us briefly recall the Committee's working methodology. Over the span of two years which elapsed between the mandate conferred by the ILA 68th Conference to pursue research in this direction, and our Final Report for the London ILA Conference, two drafts were circulated to Committee members and our scientific consultants.

The first stage following the 1998 ILA Conference consisted in the preparation of four Special Reports, aimed at establishing to what extent the major space treaties in force today should be amended as a consequence of the dramatic increase of commercial activities in outer space. This implied a re-examination of 1967 Space Treaty, the 1972 Liability Convention, the 1975 Registration Convention and the 1979 Moon Agreement.[3] These introductory reports were circulated at the end of 1998.

A number of comments and suggestions on these introductory reports were received from Committee members and other specialists. On this basis, the second stage of our task began with the drafting of a consolidated text by the Committee's General Rapporteur who, after a second round of comments, prepared a Final Report for submission to the London Conference in July 2000.

This Report also took into account proposals and conclusions stemming from other recent meetings on the subject, inter alia:

- the Workshop on Space Law for the Twenty-first Century, organised within the framework of Unispace III (1999).

- the 1999 IISL Amsterdam Colloquium.

[3] The ILA Space Law Committee decided that, for the time being, the 1968 Astronauts Agreement would not be revisited in view of its vague relationship with the commercial sides of space activities. However, some of the Committee members did not agree entirely with this course of action.

- the different Colloquia related to Project 2001 concerning the Legal Framework for the Commercial Use of Outer Space, conducted by the Institute of Air and Space Law of the University of Cologne, directed by the Chairman of the ILA Space Law Committee, Prof. Böckstiegel,

- the results of recent research projects conducted by the General Rapporteur of this Committee, Prof. Williams, in the field of Dispute Settlement and Commercial Space Activities (University of Buenos Aires),

- the conclusions of the Iberoamerican Institute of Air and Space Law at its XXIX Conference (Panamá, October 1999), and others related meetings.

We shall now refer to some of the major questions involved in the revision of the Space Law Treaties and conclusions underlying our work for the 69th ILA Conference.[4]

1.1 The 1967 Space Treaty

On general lines, this Treaty was considered flexible enough, in the present international scenario, to serve as basis for governing the activities of private entities in outer space. The Special Rapporteur on this topic, Prof. Stephan Hobe (German Branch), indicated that any possible improvements should focus on the clarification of a number of concepts, such as "outer space" (i.e., the problem of delimitation), "space object" and the definition, in more precise terms, of the scope and implications of the "common benefit" clause. Should we embark on any changes, it was also suggested that the provisions embodied in Article VI dealing with international responsibility should be clearer having in mind that this Article is closely related to a possible commitment of States to enact national laws concerning authorisation and supervision of the activities of private entitites in outer space.

Most Committee members agreed, however, that this Treaty on General Principles -as it is often referred to- should, for that very reason, remain untouched. Concern was expressed that, should amendments be introduced, its deeply-rooted principles would become affected. A majority believed that the most sensible course of action regarding changes was a separate international instrument which centered on the above-mentioned obligation of States to enact national legislation applicable to commercial space activities.

Inasmuch as the dispute settlement system laid down in the 1967 Treaty was concerned, the Special Rapporteur considered it insufficient in the present international context where commercial space activities were growing in an unprecedented scale. The need for stricter rules in this field was similarly perceived by a number of the Space Law Committee members and frequent reference was made to the Revised Text of a Convention on the Settlement of Disputes related to Space Activities adopted by the 68th Conference of the International Law Association in 1998 (see section 2 below).

[4] The Report of the Sixty-Ninth Conference of the ILA will be published shortly. The Reports of the different Committees, Working Sessions and Resolutions of the Plenary Session may be found in the ILA's website: www.ila-hq.org.

1.2 The 1972 Liability Convention

The position of the ILA Space Law Committee regarding this Convention was one of entire support to the proposal made by Austria to the Legal Subcommittee in 1998 whereby States should be encouraged to avail themselves of paragraph 3 of UNGA Resolution 2777 (XVI) and thereby accept, on a basis of reciprocity, the binding nature of the Claims Commission awards.[5]

The Special Rapporteur, Prof. Maureen Williams (University of Buenos Aires, Argentina), considered this idea as a mid-way solution which by no means outspaced the target of moving towards more effective mechanisms for dispute settlement. The Austrian proposal, she considered, does not mean a retreat on the claim for compulsory procedures but, merely, a retreat on the insistence concerning such procedures. Even though the political moment is certainly more propitious for advancement now than in 1972 when the text of the Convention was adopted, the will of the space powers still seems to be lacking.

The definition of damage contained in Article I of the Liability Convention was viewed, in general, as acceptable. However, some of the Committee members observed the shortcomings of this definition not covering, with sufficient clarity, damage caused by space debris. Yet, on this point, reference is made to the 1994 ILA International Instrument on the Protection of the Environment from Damage caused by Space Debris -on which a short comment is found below in section 3. The text of this Instrument, as may be recalled, has been presented and explained by Prof. Böckstiegel both at the Legal Subcommittee of COPUOS and the at Full Committee.

Another controversial question within the Liability Convention relates to the provisions on the applicable law (Article XII). The Special Rapporteur considered, and most of the Space Law Committee members agreed, that this Article was exclusively concerned with public international law and did not raise a problem of conflict of laws. International law and the principles of justice and equity were considered less vague and obscure than part of the doctrine sometimes contended. Briefly, this Article, which goes as far as establishing the obligation of a „restitutio in integrum", is viewed as one of the greatest achievements of the Liability Convention. In this sense, a number of references based on case law were mentioned by the Special Rapporteur.

Thus, within our Space Law the general idea on Article XII of the Liability Convention is that the provisions on applicable law, according to which compensation is to be established, should remain as they stand today.

1.3 The 1975 Registration Convention

A number of steps have been suggested by the ILA Space Law Committee to make this Convention consistent with the present times. In the first place, that national registries kept by the launching States should be unified as much as possible and that further requirements should be added to Article 4 of this Convention, such as references to the owners and operators of the space object.

[5] UNGA Resolution 2777 (XXVI) was adopted on 29 November 1971.

The Special Rapporteur on this Convention, Professor Vladimir Kopal (Czech Republic), in a practical and realistic approach to the question, underlined the need for registrations –both national and international- to help in the clear identification of the launching State or States and other entities participating in the launching as well. He favoured the idea of not changing this Convention to include these suggestions but, rather, to negotiate some kind of binding international instrument or, as a first step, a UN General Assembly Resolution based on a COPUOS (Legal Subcommittee) Draft.

The overall conclusion of this Special Rapporteur –fully shared by the ILA Space Law Committee- was that the main issues arising from commercial activities in space were only remotely related to the Registration Convention. Indeed, it is to the 1967 Space Treaty and the 1972 Liability Convention that the commercial sides of these activities are closely linked.

1.4 The 1979 Moon Agreement

Contrary to the general feeling within the ILA Space Law Committee that the above-analysed Space Treaties should be kept in their present reading and -if necessary- adjustments or changes be introduced by means of separate instruments, the Moon Agreement was seen in a different light. The low number of ratifications obtained so far clearly indicated that the international community was not prepared to go along with its provisions, particularly Article 11 stating that the Moon and its resources are the common heritage of mankind and envisaging the setting up of an international system for the management of those resources.

The reaction of our Committee to this Agreement may be summarised as „we either improve on it or replace it". The Special Rapporteur, Dr. Frans von der Dunk (Netherlands Branch) observed that neither developed nor developing countries had shown an interest in the Moon Agreement. As to improvements, consensus began to grow within the ILA Space Law Committee of drawing analogies from the Law of the Sea, particularly in connection with the controversial nature of Part XI of the 1982 Montego Bay Convention dealing with areas beyond national jurisdiction. As is known, the polemic drafting of Part XI of the Convention led to further negotiations resulting in the adoption of an Agreement on its implementation.[6]

The Special Rapporteur on this topic identified a list of provisions included in the Moon Agreement which, either directly or indirectly, were related to commercial space activities. In this respect, the frequent references to "use" and "exploitation" were mentioned, and the lack of general agreement on the scope and implications of the terms "exploration", "use" and "exploitation" was pointed out. The term "exploitation", as may be recalled, does not appear one single time in the 1967 Space Treaty.

1.5 Additional views of the ILA Space Law Committee members on the need for changes to the Space Treaties

Many members of the ILA Space Law Committee had the opportunity to meet and discuss various outstanding issues related to the amendment of the Space

[6] 1994 New York Agreement on the Implementation of Part XI of the Law of the Sea Convention.

Treaties during the Working Session of the 69th Conference of the Association (London July 2000).

It therefore seems appropriate to pause on the - sometimes - dissenting but certainly enlightening views expressed within our Committee.[7]

One of the points of criticism was Article VI of the 1967 Treaty around which members' positions ranged from mild concern (such as the view of the Special Rapporteur for this Treaty) to sharp concern for what they considered were serious gaps in that Article. Prof. Bin Cheng, for example, strongly advocated the need to revise this provision which, in its present reading, raises uncertainties. For example, if States are made directly responsible for private national activities in space it would follow that not only acts committed by States would be breaches of public international law but arguably breaches of domestic law, both civil and even perhaps criminal. To match the suggested changes, the amendment of Article VIII of the 1967 Treaty was suggested with the possible introduction of the concept of nationality for spacecraft. Similarly, the legal status of space objects landed or constructed on a celestial body was considered in need of urgent attention.[8]

In general, and having in mind the reluctant attitude of the international community towards the introduction of changes, a cautious approach to the revision of the Space Treaties was recommended. In this sense, and as stated in his Special Report on the Registration Convention, Professor Kopal observed that adjustments should be made by means of protocols or annexes. Concerning this Agreement, Prof. Kopal drew attention to the desirability of reconsidering and elaborating Article 11 which was, to date, a source of misunderstanding, as the exploitation of the natural resouces of the Moon is about to become feasible.

A further question discussed at the ILA London Conference was the obstacles standing in the way of the modification of treaties. In the case of the Space Treaties the different groups of Parties to each of them made this procedure particularly difficult, especially having in mind that, in accordance with international law, only the Parties were entitled to amend the Treaties. In practice, therefore, any such course of action appeared extremely complicated and unrealistic.

Discussion also centered around the possibility of drafting a comprehensive convention on the Law of Outer Space, following a proposal to this effect made by the Russian delegation to the Legal Subcommittee of COPUOS at its 39th Session in 2000. Prof. Kolosov, present at the London Conference, pointed out that the Principles on Direct Broadcast and Nuclear Power Sources in Outer Space could perhaps be included in this kind of Convention. The model provided by the 1982 Law of the Sea Convention was similarly mentioned within this context.

A number of our Committee members considered this proposal ran counter to the objective of increasing the number of ratifications to the existing Space Treaties. On this point the efforts made, and almost insurmountable problems encountered, in the field of air law and liability leading to the 1999 Montreal Convention replacing the Warsaw System were brought to mind at the London Conference.

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[7] See note 3.

[8] See, further, Bin Cheng, STUDIES IN INTERNATIONAL SPACE LAW, Oxford Clarendon Press 1997, especially chapters 17 and 18. Also, S.M. Williams in her review of this book, I&CLQ, Vol. 48, Part I, January 1999, pp.238-241

So far, the general conclusions drawn from the work of the ILA Space Law Committee on the need to review the Space Treaties in view of commercial space activities. At the end of the Conference the Space Law Committee was requested to

elaborate concrete proposals regarding possible amendments of, as well as possible supplements to, the United Nations space law instruments in view of commercial space activities, to be presented to the next ILA Conference in 2002.[9]

2. Dispute settlement

In connection with dispute settlement let us recall from earlier reports of the ILA to COPUOS that the ILA Revised Text on a Draft Convention on the Settlement of Disputes related to Space Activities was adopted by the ILA 68th Conference (Taipei, May 1998). Only minor adjustments were introduced to the former text adopted by the ILA in 1984 (61st Conference, Paris). Among the striking features of this Draft, mention should be made of Article 10 which leaves the door open for private entities to be parties to the dispute settlement mechanisms established by the Convention for sovereign States.

It should be equally borne in mind that the need for more effective procedures in the field of dispute settlement was a matter of concern to the Workshop on Space Law in the Twenty-first Century held within the framework of Unispace III in Vienna (July 1999) and that the ILA Draft was addressed in the various sessions of this meeting. As observed earlier, this Draft has been discussed and supported at international, regional and national fora and its provisions have been the object of profound analysis in different research projects. On this question the 69th Conference of the ILA requested its Space Law Committee

to continue its consideration of the issues related to dispute settlement regarding space activities and, in particular, of commercial space activities and of steps that may be appropriate to promote progress in this regard in view of the work of COPUOS related to this subject.[10]

3. Space Debris

Recalling earlier reports of the ILA to COPUOS, in the aftermath of the adoption of the ILA International Instrument on the Protection of the Environment from Damage Caused by Space Debris (66th Conference, Buenos Aires 1994), the subject has continued under permanent study by the ILA. This Instrument is frequently referred to at national and international meetings and one of the common denominators to be drawn therefrom is that it appears timely for this question to be included in the agenda of the Legal Subcommittee of COPUOS. It may be added that developing countries which, in many cases, are operating their own domestic satellites, have shown concern on the absence of clearer rules governing the matter.

[9] Resolution N° 13/2000 of the 69th ILA Conference, part 1.

[10] Resolution N° 13/2000 of the 69th ILA Conference, part 2.

On this topic the 69th Conference of the ILA requested our Committee

to continue its consideration of the legal aspects of space debris and of steps that may be appropriate in following up the Buenos Aires Draft Convention and in view of the work of the COPUOS related to the subject.[11]

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[11] Resolution N° 13/2000 of the 60th ILA Conference, part 3

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Review of existing national space legislation illustrating how States are implementing, as appropriate, their responsibilities to authorize and provide continuing supervision of non-governmental entities in outer space

Note by the Secretariat

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I. Introduction

1. At its thirty-ninth session, in 2000, the Legal Subcommittee requested the Secretariat to prepare a paper setting out the key elements of existing national space legislation that, in the Secretariat's judgement, illustrated how States were implementing, as appropriate, their responsibilities to authorize and provide continuing supervision of non-governmental entities in outer space (A/AC.105/738, para. 87).

2. The present document has been prepared by the Secretariat in response to that request and includes a review of relevant national space legislation known and available to the Secretariat at the time of its preparation.

3. The present review does not cover national legislation that simply serves to enact the texts of existing international space law instruments, mutatis mutandis, into domestic law. Nor does it cover national space legislation that is not directly concerned with the space-related activities of non-governmental entities. Additionally, while it is recognized that the scope and application of national legislation on subjects such as civil liability, trade law, transport law, securities, intellectual property, telecommunications, national security and so on could be and in some cases are extended to the space-related activities of non-governmental entities, the present note concentrates on national legislation that is specifically focused on space.

II. Review of national space legislation

A. Argentina

4. The two legislative instruments identified under Argentine law that illustrate how the State of Argentina is implementing, as appropriate, its responsibilities to authorize and provide continuing supervision of non-governmental space activities are National Decree No. 995/91, Creation of the National Commission on Space Activities, and National Decree No. 125/95, Establishment of the National Registry of Space Objects Launched into Outer Space.

5. Article 1 of National Decree No. 995/91 creates the National Commission on Space Activities (CONAE) as an administratively and financially autonomous entity accountable directly to the President of Argentina. Article 2 of the same instrument stipulates that CONAE shall be the only national state body competent to take charge of, formulate, implement, monitor, manage and administer projects and undertakings in the field of space. While article 2 does not specifically indicate whether such projects or undertakings would also include those of non-governmental entities, this is implied by article 3, which includes among the functions of CONAE the coordination of all activities of the National Space System, including all public and private institutions engaged in space activities, whether directly or indirectly.

6. The means whereby CONAE coordinates and administers space-related undertakings is elaborated upon in National Decree No. 125/95. Article 1 establishes a national registry of objects launched into outer space under the direct authority of the Commission. Article 2 stipulates that the registration of space objects shall be effected in the national registry by their owners and operators, together with particulars of any rights, resolutions, contracts and other legal acts or deeds relating to the space object. The wording of this article appears to include within its application private entities that own or operate space objects. It is not specifically stated in the instrument whether the registration requirement is limited to owners and operators of Argentine nationality.

7. Article 3 specifically reiterates that the registration of space objects in the national registry shall be mandatory and that such registration shall, in conformity with existing international rules, confer national jurisdiction and control over the registered space object, wherever it may be located. This would seem to represent a clear assumption of responsibility by CONAE and the State of Argentina for activities connected with space objects appearing in the national registry.

8. Article 5 of National Decree No. 125/95 sets out the information that must be provided for inclusion in the national registry, including, inter alia, if the object has been launched jointly with one or more other launching States and the international conventions concluded with such State or States; the anticipated date and territory or location of the launch; the name and address of the owners and/or operators of the space object; the identification of the firms participating in the construction of the space object and of its launch

vehicle; the identification of the launch service provider; information on the insurance arranged; the identification of the party responsible for exercising control over the space object; the location and character of the satellite tracking, telemetry and command station and of the master or tracking station, if applicable; information on on-board transmission power and frequencies of the space object; the anticipated useful life of the space object; precautions taken with regard to non-pollution of outer space, including celestial bodies, in particular whether mechanisms have been provided for placement in a transfer orbit at the end of the useful life of the space object; the anticipated date of disintegration, recovery or loss of contact with the space object; and any identifying mark located on non-disintegrable parts. The nature of the information that must be provided for purposes of registration of space objects under article 5 is indicative of the administrative and monitoring function that would be carried out by CONAE in the case of non-governmental space-related activities.

9. While the provisions of National Decree No. 125/95 do not specifically deal with the manner in which CONAE might utilize the above-mentioned information provided for registration of space objects, the instrument should be read in conjunction with article 2 of National Decree No. 995/91 discussed in paragraph 5 above. In addition, it should be noted that article 4 of National Decree No. 995/91 empowers CONAE to take any legal steps necessary for its proper functioning in the exercise of its powers and responsibilities.

B. Australia

10. In Australia, space activity is regulated in accordance with the provisions of the Space Activities Act, No. 123 of 21 December 1998. Part 1, section 3, of the Act indicates that the objects of the Act include the establishment of a system for the regulation of space activities carried on either from Australia or by Australian nationals outside Australia. The term "Australian national" is defined in section 8 as meaning (a) an Australian citizen; or (b) a body incorporated by or under the law of the Commonwealth of Australia, or a state or territory thereof; or (c) the Commonwealth, or a state or territory itself. It is also implied by the wording of section 3 that the Act is applicable to space activities carried on by non-Australian nationals, if they are conducted from the territory of Australia.

11. The regulation of space activities under this Act is carried out under the authority of the Minister for Industry, Science and Resources, primarily through delegation under section 104 to the Space Licensing and Safety Office established within the structure of the Department of Industry, Sciences and Resources. This is not expressly stated in the text of the Act itself, but is indicated by the explanatory memorandum that was circulated with the text during its consideration in the Australian Parliament.

12. Part 3 of the Act sets out the conditions and procedures for the regulation of various space activities. Within that part, section 18 provides for the granting by the Minister of a space licence to a person to operate a launch facility in Australia and to launch a particular type of launch vehicle from such facility on the satisfaction of certain criteria. These include, inter alia, competency of the person to operate the launch facility and kind of launch vehicle; obtaining of all necessary environmental approvals; evidence of sufficient funding to construct and operate the facility; meeting of necessary public health and safety standards; and not compromising Australia's national security, foreign policy or international obligations. Additionally, section 20 establishes as standard conditions of the space licence that the licensee provide any information requested by the Minister and facilitate the proper performance of activities by the Launch Safety Officer (described in para. 18 below). Such space licence may be transferred to another person upon application to the Minister (sects. 22 and 23). Failure to comply with the conditions of a space licence may lead to civil penalties for the contravening person, as well as the suspension of the licence by the Minister (sect. 25). The Minister may also vary or revoke the licence, even while it is suspended (sect. 25, para. 3).

13. Section 26 of the Act provides for the granting by the Minister of a launch permit to a person for the launch of a particular space object or series of similar such launches from a specified launch facility in Australia using a specified kind of launch vehicle. The launch permit may also authorize the return of such space objects to a specified place or area in Australia. Such launch permit may only be granted provided certain criteria are satisfied. One of these is that the

person being granted the permit is already the holder of a space licence granted under section 18 for the launch facility and type of launch vehicle concerned. Thus, a two-tiered system of licensing is established for launching of space objects, with the possession of a valid licence to operate a launch facility being a sine qua non for the issuance of a launch permit.

14. Additional criteria for the granting of a launch permit include, inter alia, that the person carrying out the launch and any connected return is competent to do so; that the necessary insurance/financial requirements specified in division 7 of the Act are satisfied; that necessary public health and safety standards are met; and that Australia's national security, foreign policy or international obligations are not compromised. Furthermore, standard launch conditions set out in section 29 require that the launch or connected return of a space object not be conducted in a way that is likely to cause substantial harm to public health or safety or property and that the object not be or contain any nuclear weapon, weapon of mass destruction or unauthorized fissionable material. Breaching of these latter conditions can lead to severe criminal penalties under section 30. Sections 31-34 provide for conditions and procedures for the transfer, variation, suspension and revocation of launch permits similar to those for a space licence.

15. Section 35 of the Act provides for the issuance of overseas launch certificates in order to authorize the launch of space objects from facilities outside Australia in cases where an Australian national is a "responsible party". This latter term is defined to include any person or persons carrying out the launch or return of the object and any person who owned all or part of any payload forming part of the space object during the liability period. The conditions and procedures for the granting of such an overseas launch certificate largely mirror those for a space licence and launch permit.

16. A unique element of the Australian legislation appears in division 5 of part 3 of the Act (sects. 42-45), which provides for the granting of authorization to return to an area or place in Australia of an object previously launched into space from outside Australia. Such authorization is granted by permission of the Minister or agreement concluded on behalf of the Commonwealth of Australia, under conditions similar to those applied for the return of space objects originally launched from within Australia.

17. Sections 11-15 of the Act specify that the conduct or operation of any of the above-mentioned space activities or facilities without the requisite authorizations, or a duly issued exemption, results in significant criminal liability for the unauthorized person. The details of the criminal penalties to be incurred are also set out in those sections.

18. Further measures enabling Australia to fulfil its obligations to provide continuing supervision of national non-governmental space activities are contained in the provisions of sections 50-58 of the Act. Under those provisions, the Minister is required to appoint a Launch Safety Officer for each licensed launch facility. The Launch Safety Officer is responsible for ensuring that any requisite notices are given of launches at the facility, that no person or property is endangered by any launch conducted at the facility and that all conditions of space licences and launch permits are fully complied with. The Launch Safety Officers are granted fairly wide powers in order to carry out their functions. Those powers include the right to enter and inspect facilities and space objects at the facilities with the consent of the licence holder, to request necessary information concerning the activities under consideration, to provide directions concerning a specific launch in order to avoid danger to public health, persons or property (including directions to stop the launch or destroy the space object) and search and seizure powers in case of emergency.

19. In a similar manner, sections 84-103 of the Act set out specific and detailed conditions and procedures in the case of an accident or incident involving a space object during the liability period for a launch or return. Immediately following an accident, and until such time as the Minister advises otherwise, any relevant launch permits and other authorizations are automatically suspended (sect. 95). In the case of an accident the Minister must appoint a suitably qualified and experienced person as the Investigator of the accident, while in the case of an incident, the choice of whether to make such an appointment is at the discretion of the Minister. The Act grants extensive investigative powers to the Investigator, similar to those enjoyed by the Launch Safety Officer. The Investigator is required to provide a written report to the Minister following

completion of his investigation, upon which the Minister acts as appropriate.

20. Finally, the Australian Act has extensive provisions dealing with the issue of liability for damages caused by space-related activities. Firstly, as mentioned above, in order to obtain a launch permit, overseas launch certificate or section 43 authorization (overseas launched object returning to Australia), the person applying is required to meet certain insurance/financial requirements. These requirements are set out in sections 47-49 of the Act. The applicant must, during the liability period of the launch or return, either satisfy the insurance requirements set out in section 48 or (in accordance with the regulations to be promulgated) show direct financial responsibility for the launch or return. Section 48 provides that insurance requirements for a launch from or return to Australia are met if the applicant is insured to the extent of maximum probable loss (as determined according to a method set out in the regulations) against any liability incurred for third party damage; and the Commonwealth of Australia is similarly insured against liability that it might incur under the Convention on International Liability for Damage Caused by Space Objects (the "Liability Convention", General Assembly resolution 2777 (XXVI), annex) or otherwise under international law. In the case of launches conducted outside of Australia by Australian nationals, only the latter insurance is required to be evidenced. In all cases the Commonwealth is not required to take out insurance, rather the applicant is required to take out insurance on its behalf.

21. Furthermore, sections 63-75 of the Act establish Australia's position with respect to the incurring of liability for damage caused by space objects in the circumstances discussed above, as well as the basic conditions and procedures for establishing liability and claiming compensation. Section 69 limits the amount of a duly authorized permit or certificate holder's liability to that amount for which insurance was required for issuance of the relevant authorization, provided there has been no breach of the conditions of the authorization or wilful or grossly negligent misconduct. Section 70 excludes from this limitation the case of a non-Australian national who incurs liability as a result of the return to Australia of a space object launched from outside of Australia. In accordance with section 64, paragraph 2, this limitation will not prevent Australia from complying with any obligation to pay compensation under the Liability Convention or otherwise under international law for such damage. However, in the event of such, the responsible party for the launch or return is required under section 74 to compensate the Commonwealth of Australia in an amount equal to the lesser of the amount actually paid by Australia under the claim or, if the launch or return is duly authorized, the insured amount specified for the authorization.

C. Japan

22. As indicated in a presentation to the Legal Subcommittee at its thirty-ninth session, in 2000,[1] the space-related activities of Japanese non-governmental entities, in particular the launching of space objects, are at present fairly limited. All launches from Japan are currently conducted by either the National Space Development Agency (NASDA), a public corporation established by the Law concerning the National Space Development Agency of Japan, No. 50 of 23 June 1969 (the "NASDA Law"), or by the Institute of Space and Astronautical Science (ISAS), a national research institute established under the auspices of the Ministry of Education.

23. However, an amendment of the NASDA Law, effective from 3 June 1998, illustrates how the State of Japan is implementing, as appropriate for the launching of space objects, its responsibilities to authorize and provide continuing supervision of non-governmental space activities. Article 22 of the NASDA Law details the scope of business of NASDA and includes therein the development of rockets for the launching of artificial satellites, the launching and tracking of artificial satellites and the development of means, facilities and equipment necessary therefore in situations where NASDA performs such activities under consignment arrangements with non-governmental persons or entities. Article 22, paragraph 2, however, stipulates that such conduct by NASDA shall be in compliance with guidelines prescribed with the authorization of the appropriate minister.

24. Additionally, the NASDA Law now contains a sub-chapter on compensation for damages due to launch of artificial satellites. Article 24-2 of that sub-chapter sets as a precondition for any launch by NASDA, including those performed under consignment for non-governmental persons or entities, that

insurance has been obtained that secures such amount as is necessary to compensate for damages incurred by third parties as a result of the launch. In the case of a "consigned launch", article 24-2, paragraph 3, provides that this insurance may be entered into by the person or entity consigning the launch for and on behalf of NASDA. This does not appear to be necessarily a mandatory requirement, however, but dependent upon the specific arrangement between the consigning person or entity and NASDA in each case. Article 24-3 allows NASDA, with ministerial approval, to enter into arrangements for consigned launches whereby it assumes complete liability in the event that it would otherwise be held jointly liable with the consigning person or entity for damages caused to third parties. In such cases, insurance being taken out for such damages by the consigning person or entity for and on behalf of NASDA is a mandatory requirement. It is not evident from the wording of the above-mentioned provisions what damages would qualify as resulting from a particular launch and thus fall within the scope of the insurance requirements, nor whether these would also include damages caused by a space object subsequent to its launch.

D. Russian Federation

25. The Russian Federation has various legislative and regulatory instruments governing specific aspects of space-related activities. However, the principal instrument of legislation on space activity in the Russian Federation is the Law on Space Activity, Federal Law No. 5663-1 of 20 August 1993, as amended by Federal Law No. 147-FZ of 29 November 1996.

26. The introductory section of the Law on Space Activity indicates that it is intended to provide legal regulation for space activities, which are defined in article 2, paragraph 1, as any activities directly connected with operations to explore and use outer space, including the Moon and other celestial bodies. Article 2, paragraph 1, then lists certain main areas of space activity, including, inter alia, scientific space research; use of space technology for communications; remote sensing of the Earth from outer space (including environmental monitoring and meteorology); use of navigation, topographical and geodesic satellite systems; manned space missions; observation of objects and phenomena in outer space; testing of technology in outer space conditions; manufacturing of materials and products in outer space; and other types of activity performed with the aid of space technology. The scope of the Law is therefore relatively broad, which is borne out by the text of its specific provisions dealing with diverse matters ranging from the responsibility of the President of the Russian Federation and various sections of the Government to the development and coordination of the Russian Federal Space Programme, the financing of space activity and the registration and use of space technology and intellectual property. Additionally, the provisions of the Law establish the regime by which the Russian Federation implements its responsibility to authorize and provide continuing supervision of the space-related activities of non-governmental entities.

27. Article 6 provides that the federal executive body responsible for space activity (currently the Russian Aviation and Space Agency (RASA)) shall be responsible, inter alia, for the issuance of licences for various types of space activity. This responsibility is performed with the advice and assistance of committees of disinterested experts and specialists established in accordance with article 11. Article 9 further states that licensing requirements shall apply to space activity pursued or undertaken by organizations and citizens of the Russian Federation or to the space activity pursued or undertaken by the foreign organizations and citizens under the jurisdiction of the Federation where such activity includes the testing, manufacture, storage, preparation for launch or launch of space objects, or control of space flights. Article 9, paragraph 4, continues that the pursuit of space activity by an organization or citizen not in possession of a licence or in wilful violation of the terms of the licence shall be punishable in accordance with the laws of the Russian Federation.

28. The detailed conditions and procedures pertaining to the application by Russian and non-Russian non-governmental entities for such licences, as well as the granting or denial thereof by RASA appear in a separate instrument, the Statute on Licensing Space Operations, Federal Government Decree No. 104 of 2 February 1996. Additionally, article 24 of this Statute grants RASA the right to question the licensee concerning observance of the conditions of the licence; require the licensee at the time of readying for launch to be able to produce a certificate of conformance of

the space facilities and insurance policy to the mandatory insurance of space operations in accordance with Russian legislation; carry out verification monitoring of the licensee operations; and shut down operations at the site of space activity for reasons of health, safety, state interests or security, unlicensed activity or violations of licence conditions. Article 25 further provides for the suspension or annulment of licences by RASA in cases of failure by the licensee to comply with conditions of the licence or instructions or orders of state agencies; discovery of false data in documents submitted in applying for a licence; dissolution of the licensee if a legal entity or cessation of state certification if a sole proprietor; or submission of a corresponding application by a licensee.

29. Article 10 of the Law on Space Activity establishes that space technology, including space objects and space infrastructure facilities with scientific and socio-economic applications, shall be subject to certification through inspection to ensure compliance with the requirements established by the laws of the Russian Federation. While it is not stated expressly, the provisions of this article would also seem to be directed implicitly towards space technology of non-governmental entities. In accordance with article 6, administration of such certification is also the responsibility of the federal executive body responsible for space activity (RASA), which acts on the advice of expert committees established under article 11.

30. In addition to the above-mentioned licensing and certification processes, the Law on Space Activity also provides for the continuing exercise of control by the Russian Federation over space-related activities through the mechanism of registration of space objects. Article 17, paragraph 1, requires the registration of all space objects of the Russian Federation. While it is not expressly stated that "space objects of the Russian Federation" also includes objects of Russian non-governmental organizations and citizens, a common sense reading of the text would seem to imply that this is the case. This is further supported by the texts of article 17, paragraph 4 (which deals with the issue of registration and ownership in cases where a space object has been designed by Russian organizations and citizens jointly with foreign States, organizations and citizens or international organizations) and article 30, paragraph 2 (which deals with compensation payable by the organization or citizen owning the space object causing damage in the case of one "space object of the Russian Federation" damaging another "space object of the Russian Federation").

31. Article 17, paragraph 2, states that the Russian Federation shall retain jurisdiction and control over space objects registered in it during the time spent by such objects on the ground and at any stage of their flight in outer space or stay in outer space or on celestial bodies, as well as their return to Earth outside the jurisdiction of any other State. Article 17, paragraph 5, further allows for extension of the scope of control, stating that in the direct vicinity of a space object of the Russian Federation, within the minimum zone necessary for ensuring the safety of space activity, rules may be established that shall be binding upon Russian and foreign organizations and citizens. Furthermore, article 20, paragraph 4, states that the Russian Federation shall retain jurisdiction and control over any crew of a manned space flight registered in its territory. While manned space flight has until now only been carried out by governmental entities, this provision would seem equally applicable to such activity undertaken by non-governmental entities in the future. The same would be true for the provisions of article 20, paragraph 5, which subjects all citizens of foreign States who have undergone training for space flight in the Russian Federation or have participated in a flight on board a manned space object of the Russian Federation to the laws of the Federation, unless otherwise provided by international treaties to which the Federation is a party.

32. Section V of the Law on Space Activity deals specifically with the subject of safety of space activity. Article 22 of that section requires that all space activity comply with the safety requirements established by the laws and other normative legislative acts of the Russian Federation and that such activity be performed with due regard to the permissible level of man-made contamination of the environment. Primary responsibility for ensuring the safety of space activity lies with the federal executive body responsible for space activity (RASA) and the federal executive defence body.

33. In addition to the controls exercised to ensure safety through the above-mentioned mechanisms of licensing of space activity and certification of space technology, article 23 of the Act provides for the performance of investigations in the case of incidents, accidents and disasters occurring during the course of

space activity. As is the case for licensing and certification, article 11 provides assistance to investigating state bodies in the form of advisory committees of disinterested experts and specialists. Additionally, article 24 establishes responsibility for search and rescue operations and clean-up of incidents occurring in the course of space activity, including, where appropriate, that of non-governmental organizations and citizens.

34. Finally, article 25 states that organizations and citizens who use or operate space technology (including space objects and space infrastructure facilities with scientific and socio-economic applications) or who place orders for the design and use thereof shall be required to take out compulsory insurance coverage for the life and health of the cosmonauts and personnel of space infrastructure facilities and shall also bear liability for damage causing death or injury of other persons or damage to their property. By the provisions of article 27, paragraph 3, this insurance requirement is also extended to foreign organizations and citizens engaging in space activity under the jurisdiction of the Russian Federation. Article 30 establishes rules for liability and payment of compensation for damages for personal injury or damage to property caused by space objects of the Russian Federation in the course of space activity within the territory of or outside the Federation by those organizations or citizens owning the space objects or having taken out insurance to cover their liability for damage.

E. South Africa

35. The primary South African legislative instrument governing the regulation of both governmental and non-governmental space-related activities is the Space Affairs Act, No. 84 of 2 July 1993, as amended by the Space Affairs Amendment Act, No. 64 of 6 October 1995. Section 4 of the Space Affairs Act establishes the South African Council for Space Affairs under the authority of the Minister of Trade and Industry, which has as its object the implementation of the space policy of South Africa. Section 5 further provides that the Council shall on behalf of the State take care of the interests, responsibilities and obligations of the Republic regarding its space and space-related activities in compliance with international conventions, treaties and agreements entered into by the Government of the Republic.

36. Section 11, paragraph 1, states that no person (natural or legal) shall, except in terms of a licence issued by the Council, perform any of the following activities: (a) any launching from the territory of the Republic; (b) any launching from the territory of another State by or on behalf of a legal person incorporated or registered in the Republic; (c) the operation of a launch facility; (d) the participation by any legal person incorporated or registered in the Republic, in space activities entailing obligations to the State in terms of international conventions, treaties and agreements entered into by the Government of the Republic or which may affect South Africa's national interests; (e) any other space or space-related activities prescribed by the Minister by regulation. While the Act does not specify further what is meant by a "launch facility", section 1 defines "launching" as the placing or attempted placing of any spacecraft into a sub-orbital trajectory or into outer space or the testing of a launch vehicle or spacecraft in which it is foreseen that the launch vehicle will lift from the Earth's surface; and "space activities" as the activities contributing directly to the launching of spacecraft and the operation of such craft in outer space.

37. Section 11, paragraph 2, provides that a licence shall be issued subject to such conditions as are determined by the Council, taking into account minimum safety standards and the national interests and international obligations and responsibilities of South Africa. Section 13 sets out the conditions and procedures for the amendment, suspension and revocation by the Council of a licence issued and includes as grounds for such suspension or revocation that the space activity conducted is in violation of any condition of the licence, is indicated to represent an unacceptable safety risk or is in conflict with the interests of the South African State. Section 14 provides additional conditions that may be contained in the licence, including (a) liability of the licensee for damages; (b) security to be given by the licensee for such damages and the manner in which such security is to be given; and (c) liability of the licensee resulting from international conventions, treaties and agreements entered into by the Government of the Republic. Section 14 also states that the Council may, in the case of a suspension or revocation of a licence, give to the

licensee such directions as it may deem necessary to prevent loss of life, injuries or damages.

38. To assist the Council in the administration and regulation of space-related activities, it may appoint inspectors in accordance with section 10 of the Act. Such inspectors are granted the authority to enter any facility of a person who has applied for a licence, to whom a licence has been issued or where the Council has reason to believe an activity to which the Act applies is being carried out and to conduct such inspections or investigations as are deemed necessary. Inspectors may also be instructed to be present at any activity to which a licence applies in order to ascertain whether the conditions of the licence are being complied with and shall immediately report to the Council any situation or activity that poses an unacceptable safety risk.

39. Decisions of the Council are subject to review by the courts of law of South Africa (section 17) and may also be appealed to the Minister (section 16). In terms of section 9, the Minister may appoint a board of inquiry of specified experts to assist in the adjudication of such appeals or any other matter falling within the scope of the Act, for example, an investigation following an accident, incident or potential emergency under section 12.

40. Section 23 provides for various criminal offences and penalties in the event of failure to comply with the provisions of the Act. Criminal liability results from, inter alia, performance of space-related activity without the necessary licence; failure to comply with the conditions of a licence; and failure to cooperate with or comply with the instructions of the Council, inspectors or board of inquiry.

41. Finally, section 22 provides that the Minister may promulgate further regulations relating to matters within the scope of the Act, including the manner in which the functions of the Council shall be performed, the procedures for licence applications, safety measures and minimum safety standards for any space or space-related activity, measures to be taken to protect South Africa's national interests and the application of provisions of international conventions, treaties and agreements entered into by the Government of the Republic.

F. Sweden

42. The two Swedish legislative instruments regulating space activities are the Act on Space Activities (1982:963) and the Decree on Space Activities (1982:1069). The provisions of the latter instrument serve as a complement to those of the former. Section 1 of the Act on Space Activities indicates that its provisions apply to space activities including those carried out entirely in outer space as well as the launching of objects into outer space and all measures to manoeuvre or in any other way affect objects launched into outer space. Specifically excluded from the application of the Act are the mere receipt of signals or information in some other form from objects in outer space and the launching of sounding rockets.

43. Section 2 of the Act on Space Activities provides that no space activity may be carried out from Swedish territory by any party other than the Swedish State without a licence. This stipulation would seem to apply to all non-governmental space activity from within Swedish territory, including that of non-Swedish nationals. By contrast, section 2 continues with a second stipulation specifically requiring Swedish natural and legal persons carrying out space activities anywhere other than from Swedish territory also to obtain a licence. Section 3 of the Act indicates that such licence to carry out space activities is granted by the Government of Sweden, following application in writing to the Swedish National Space Board in accordance with section 1 of the Decree on Space Activities.

44. Section 3 of the Act on Space Activities states that a licence may be restricted in any way deemed appropriate or made subject to conditions aimed, inter alia, at ensuring sufficient control of the particular space activity. Section 3 further provides for the inspection of space activities of licence holders by an authority decided by the Government. Section 2 of the Decree on Space Activities appears to designate the Swedish National Space Board as that authority by declaring that the Board shall exercise control of space activities carried out by those who have licences for such activities, while section 3 of the Decree requires the Board to inform the Government in the event of a suspected infringement of the Act on Space Activities or conditions established in accordance with its provisions. The Swedish National Space Board is also

responsible in accordance with section 4 of the Decree on Space Activities for maintaining a register of space objects for which Sweden is to be considered the launching State.

45. Section 4 of the Act on Space Activities provides for the withdrawal of a licence by decision of the Government, on either a temporary or permanent basis, where the conditions thereof have been disregarded or other appropriate grounds for such withdrawal exist. Additionally, section 5 of the Act provides for criminal liability for any person wilfully or negligently carrying out space activities without the necessary licence or disregarding the conditions stipulated as a prerequisite for obtaining such a licence. Furthermore, section 5 extends the reach of Swedish criminal jurisdiction by stating that any person committing any of the above-mentioned criminal actions outside the territory of Sweden shall be subject to criminal liability and process upon return to Sweden. This extension would seem to be only applicable to Swedish natural and legal persons (i.e. not to non-Swedish non-governmental entities), as they are the only ones subject to, and so capable of criminally violating, licensing requirements and conditions for space activities outside of Sweden.

46. Finally, section 6 of the Act on Space Activities provides for the Swedish State to be reimbursed for payments made by it as a result of its incurring international liability for damages caused by space activities of persons other than the Swedish State. Except in special circumstances, such reimbursement shall be made to the State by the persons conducting such space activities. There is no indication that this provision is limited in any way and it would therefore seem to apply to all non-governmental space activity incurring liability for Sweden, regardless of whether or not it is licensed or conducted by nationals of Sweden.

G. Ukraine

47. The Law of Ukraine on Space Activity, No. 503/96-VR of 15 November 1996 indicates that it is intended to establish the general legal basis for pursuit of space activity in Ukraine and under the jurisdiction of Ukraine outside its borders and that its provisions shall apply to all types of activity relating to the exploration and use of outer space. Consequently, the provisions of the Law would also apply, as appropriate, to the space activities of Ukrainian non-governmental entities. "Space activity" is defined in article 1 of the Law as meaning scientific space research, the design and application of space technology and the use of outer space.

48. Certain specific acts in connection with the conduct of space activity in Ukraine are expressly prohibited under article 9 of the Law. These include the placement in space or testing of weapons of mass destruction; the use of the Moon or other celestial bodies for military purposes, hostile or military use of environmental modification techniques; presenting of a direct threat to the life or health of human beings and the causing of damage to the environment; the violation of international norms and standards regarding the pollution of outer space; and other acts related to space activity that are not permissible under international law. In addition, the Law provides for a regulating regime responsible for controlling and restricting, as appropriate, the space activities of non-governmental entities.

49. The Ukrainian National Space Agency is appointed in article 5 of the Law as the specially authorized central executive authority responsible for implementing State policy in relation to space activity. Article 6 includes within the competencies of the Ukrainian National Space Agency providing for the organization of space activity in Ukraine and under the jurisdiction of Ukraine outside its borders; directing the management and coordination of the work of enterprises, institutions and organizations in the space and related sectors; arranging for licensing of space activity in Ukraine and the licensing of such activity under the jurisdiction of Ukraine outside its borders; and the registration of "space facilities". "Space facilities" are defined in article 1 of the Law as meaning material objects produced by piecework that are designed, manufactured and operated both in space (space segment or infrastructure) and on the Earth's surface (ground segment or infrastructure) for purposes of exploring and using outer space.

50. In accordance with article 10 of the Law, any space facility engaging or intending to engage in space activity in Ukraine or under the jurisdiction of Ukraine outside its borders shall be required to have a licence from the Ukrainian National Space Agency for the pursuit of such activity. There is no distinction made here between space facilities owned and/or operated by Ukrainian entities and those owned and/or operated by

foreign entities. Article 10 leaves for future development under the laws of Ukraine of the list of types of space activity subject to licensing and indicates that the procedures for licensing of space activity will be established by the Cabinet of Ministers of Ukraine.

51. In addition, article 12 states that any space facility in Ukraine is subject to certification attesting to its compliance with operating requirements established by regulatory texts in force in Ukraine, with subsequent issuance of a compliance certificate. The Ukrainian Space Technology Certification System, operating as an integral part of the Ukrainian State Certification System, is responsible for determining the procedures for certification of space facilities and technology in Ukraine, as well as the testing and certification of space facilities imported to or exported from Ukraine. Furthermore, article 13 specifies that space facilities shall be subject to mandatory registration in the State Register of Space Facilities of Ukraine maintained by the Ukrainian National Space Agency in accordance with regulations to be promulgated, except to the extent that their place of registration has been agreed otherwise in terms of international agreements concluded.

52. The provisions of article 15 then state that a space facility shall only be cleared for operation if it has been issued with a compliance certificate as discussed above and also been registered in the State Register of Space Facilities of Ukraine. Article 15 further provides that the Ukrainian National Space Agency may restrict or prohibit the operation of space facilities where no compliance certificate has been issued or the period of validity of the compliance certificate has elapsed; the operation of the space facility is in violation of Ukrainian legislation currently in force; or the operation of the space facility is in violation of the requirements established by the technical operating documentation for that facility.

53. The Law of Ukraine on Space Activity also contains provisions dealing specifically with ensuring the safety of space activity. Article 20 states that state supervision of compliance with safety requirements in respect of space activity, as well as the training and certification of persons responsible for monitoring compliance with space regulations and verifying the necessary level of safety and of persons investigating incidents and emergencies shall be the responsibility of the Ukrainian National Space Agency, the Ministry of Defence and other executive authorities within their competence. Article 21 requires enterprises, institutions and organizations (whether domestic, international or foreign) engaging in space activity to comply with safety requirements regarding the life and health of the public, the property of citizens, enterprises, institutions and organizations and protection of the environment. Article 23 further imposes a compulsory requirement upon enterprises, institutions and organizations (whether domestic, international or foreign) engaging in space activity to furnish full information to state executive authorities on any incidents or emergencies occurring in connection with such activities.

54. The Law of Ukraine on Space Activity does not contain detailed additional provisions on the issues of liability for damages caused by space activity, compensation therefor and insurance required for such activities. Instead, articles 24 and 25 indicate that these shall be established by Ukrainian legislation currently in force and procedures established by the Cabinet of Ministers of Ukraine, thereby implicitly providing for the possibility, as necessary, of further detailed rules in this regard being drawn up. What is also apparent is that compulsory insurance is clearly envisaged under this general legal basis for the pursuit of pace activity in Ukraine and under the jurisdiction of Ukraine outside its borders. Similarly, article 29 states that offences under the legislation on space activity in Ukraine shall be punishable by disciplinary, civil law or criminal penalties in conformity with Ukrainian legislation currently in force.

55. Finally, article 8 of the Law provides for the establishment of regulations by relevant state authorities of Ukraine within their competence that shall be binding upon all enterprises, institutions and organizations (whether domestic, international or foreign) engaging in space activity. Article 8 further states that such regulations would include operating standards for space facilities, other regulatory acts governing compliance with the requirements of intellectual property protection and state, military and commercial secrecy, and standards and regulatory texts governing procedures for the following: licensing of space activity; certification and registration of space facilities; organization, execution and ensuring the safety of space launches and flights; supervision and monitoring of the safety of space launches, flights and the operation of space facilities; environmental protection in the course

of space activity; conduct of search and rescue operations in connection with space activity; conduct of official investigations of incidents and emergencies; construction, operation, maintenance and repair of installations and equipment of infrastructural ground facilities; training of personnel of space facilities; and implementation of measures to protect space activity from unlawful intrusion.

H. United Kingdom of Great Britain and Northern Ireland

56. As is stated in the text of its preamble, the Outer Space Act 1986 of the United Kingdom of Great Britain and Northern Ireland, which came into force on 31 July 1989, was enacted specifically to confer licensing and other powers on the Secretary of State to secure compliance with the international obligations of the United Kingdom with respect to the launching and operation of space objects and the carrying out of other activities in outer space by persons connected with that country. These conferred powers and their corresponding responsibilities are exercised on behalf of the Secretary of State by the British National Space Centre (BNSC), which is also responsible for maintaining the national register of space objects.

57. Section 1 indicates the application of the Act to launching or procuring the launch of a space object; operating a space object; or any other activity in outer space whether carried on in the United Kingdom or elsewhere. Section 2 further establishes that the Act applies to all United Kingdom nationals (including citizens of British dependent territories, British overseas citizens and British nationals located overseas), Scottish firms, and bodies incorporated under the law of any part of the United Kingdom.

58. Section 3 then prohibits any person to whom the Act applies from carrying on any activity to which the Act applies except under the authority of a licence granted by the Secretary of State. There are certain exceptions provided where such licence would not be required, including for actions by a person acting as an employee or agent for another; for activities where arrangements have been made between the United Kingdom and another country to secure compliance with the international obligations of the United Kingdom; or where an exemption has been granted by the Secretary of State on grounds that such requirement is not necessary to secure compliance with the international obligations of the United Kingdom. In practice, as is indicated in their published information for licence applicants, BNSC currently does not require a licence to be obtained for the leasing of space segment satellite capacity (transponders) from international intergovernmental satellite organizations or privately owned entities; or for the utilization of space segment satellite capacity (transponders) using Earth stations for either transmissions or reception purposes (unless carried out by persons involved in telemetry, tracking and control of space objects).

59. In accordance with section 4 of the Act, the Secretary of State may grant a licence if he thinks fit, provided that no licence shall be granted unless it is shown that the activities to be authorized will not jeopardize public health or the safety of persons or property; will be consistent with the international obligations of the United Kingdom; and will not impair the country's national security. Furthermore, section 5 provides that a licence shall be granted for such period and subject to such conditions as the Secretary of State deems fit. In particular, the licence may contain conditions, inter alia, permitting inspection and testing of the licensee's facilities and equipment; requiring the licensee to provide information indicated by the Secretary of State concerning the nature, conduct, location and results of the licensee's activities; requiring the licensee to obtain advance approval for any intended deviation from orbital parameters and to notify the Secretary of State of any unintended deviation; requiring the licensee to conduct operations in such a way as to prevent contamination of outer space, adverse changes to the Earth's environment or interference with the space activities of others; requiring the licensee to insure against liability incurred in respect of damages or loss suffered by third parties, in the United Kingdom or elsewhere, as a result of the activities authorized; and governing the disposal of the payload in outer space on the termination of operations.

60. A licence may be transferred with the written consent of the Secretary of State in accordance with section 6 of the Act. Section 6 further provides for the revocation, variation and/or suspension of the licence by the Secretary of State in cases of non-compliance with a condition of the licence or regulation under the Act or where such revocation, variation and/or suspension is required in the interests of public health,

national security or any international obligation of the United Kingdom. Section 6, paragraph 3, of the Act, however, makes it clear that the revocation, suspension or expiry of a licence does not affect the obligations of the licensee under the licence.

61. Additionally, section 10 of the Act stipulates that any person to whom the Act applies shall indemnify the Government of the United Kingdom against any claims brought against the Government in respect of damage or loss arising out of activities carried on to which the Act applies. Exceptions to this requirement are allowed for persons acting as employees or agents of another and for damage or loss resulting from anything done on the instruction of the Secretary of State.

62. There are two primary mechanisms to ensure compliance by non-governmental entities. The first mechanism allowing for immediate or rapid enforcement is established under sections 8 and 9 of the Act, which enable the Secretary of State to give directions to a person carrying on activities in contravention of the licensing requirements of section 3 or the conditions of an issued licence. Such directions may be enforced by injunction, interdict or by direct action taken in accordance with a warrant issued by a justice of the peace. The second mechanism for compliance is established by section 12 of the Act, which provides for various criminal offences relating to activities undertaken in contravention of the regulations, conditions and directions issued or in force under the authority of this Act. Of particular interest in this regard are the provisions providing for personal criminal liability of the directors and officers of bodies corporate, as well as for proceedings treating offences committed outside the United Kingdom as if they had been committed within the United Kingdom.

I. United States of America

63. Unlike most of the States discussed above, the United States of America does not have a single or primary legislative instrument that governs its national space activities in general. Instead, the United States implements its responsibilities to authorize and provide continuing supervision of the space-related activities of non-governmental persons and entities through the operation of a legal regime consisting of a number of complementary legislative and regulatory instruments.

64. The conduct of commercial launch and re-entry operations by non-governmental entities is regulated by the Commercial Space Launch Act of 1984, 49 United States Code (USC) 70101 et seq. (as amended, inter alia, by the Commercial Space Act of 1998) and the Federal Regulations, 14 Code of Federal Regulations (CFR) parts 400-499, promulgated in terms of this Act. Section 70101 (b) (3) of the codified Commercial Space Launch Act provides that the Secretary of Transportation is to oversee and coordinate the conduct of commercial launch and re-entry operations, issue and transfer commercial licences authorizing those operations and protect the public health and safety, safety of property and national security and foreign policy interests of the United States. In practice, those responsibilities are exercised on behalf of the Secretary of Transport by the Office of Commercial Space Transportation of the Federal Aviation Administration.

65. Section 70104 (a) of the codified Act requires a duly issued or transferred licence for (a) a person or entity (regardless of their nationality) to launch a launch vehicle or operate a launch or re-entry site or to re-enter a re-entry vehicle in the United States; (b) a citizen of or entity organized under the laws of the United States to launch a launch vehicle or operate a launch or re-entry site or to re-enter a re-entry vehicle outside the United States; and (c) for an entity organized under the laws of a foreign country in which a controlling interest is held by a United States citizen or legal entity to launch a launch vehicle or operate a launch or re-entry site or to re-enter a re-entry vehicle outside the United States unless a foreign country has jurisdiction over such activity by reason of territoriality or agreement with the United States Government.

66. In accordance with Federal Regulations, 14 CFR parts 400-499, various categories of licence are obtainable by issuance or transfer following application in accordance with the procedures and conditions prescribed by the Secretary of Transportation. These include launch licences; licences for launch and re-entry of reuseable launch vehicles; licences to re-enter a re-entry vehicle other than a reusable launch vehicle; licences to operate a launch site; and licences to operate a re-entry site. Licences in the first three categories are further divided into those granted for a specific activity or activities having the same parameters and "operator" licences, which are granted for a range of activities with various authorized parameters

involving launchers, re-entry vehicles or payloads within the same families or classes. In all cases, applications for licences are preceded by a mandatory consultation between the applicant(s) and the Office of Commercial Space Transportation to discuss potential issues relevant to the latter's licensing decisions. Thereafter, in order to be granted, each licence application is required to obtain a series of approvals based upon evaluations conducted by the Office of Commercial Space Transportation in coordination with other divisions of the United States Government.

67. For all of the types of licences described above, a policy review is conducted in coordination with the Departments of Defense and State, the National Aeronautics and Space Administration and other appropriate agencies to determine whether the launch, re-entry or operation of a launch or re-entry site by the applicant would jeopardize United States national security or foreign policy interests or international obligations. Similarly, for all types of licence, a safety review is conducted to determine whether the applicant is capable of conducting the proposed activity without jeopardizing public health and safety and safety of property. The requirements of those safety reviews are specific to the type of activity but in all cases consider such issues as identification, analysis and compliance with acceptable risk criteria; existence of safety organizations and officials; and accident emergency response and investigation plans and procedures. Furthermore, applications for all types of licence are subject to an environmental impact analysis to ensure compliance with, inter alia, the requirements of the National Environmental Policy Act, 42 USC 4321 et seq.; the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, 40 CFR parts 1500-1508; and the Federal Aviation Administration's Procedures for Considering Environmental Impacts, FAA Order 1050.1D.

68. In the case of licences for launches and/or re-entries, a payload review is also conducted to determine whether the launch or re-entry of the payload would jeopardize public health and safety, safety of property, United States national security or foreign policy interests or international obligations. The only exceptions to this payload review are those payloads which are owned or operated by the United States Government or are subject to licensing by the Federal Communications Commission or the Department of Commerce (National Oceanic and Atmospheric Administration), as discussed in paragraphs 71 and 72 below. This payload review is a critical component because in the case where the nature, operation and activities of a given space object have the potential to jeopardize public health and safety, safety of property, United States national security or foreign policy interests or international obligations, the Office of Commercial Space Transportation would presumably conclude that the space object's launch or re-entry would have a similar effect and consequently refuse to grant the necessary approvals. Therefore, de facto this payload review component extends the scope of the Office of Commercial Space Transportation's authorization and control beyond just the activities of launching and re-entry to include the nature, operation and activities of all space objects launched or re-entered under United States licence.

69. In addition to obtaining the approvals discussed above, all launch and re-entry licensees are obliged to comply with certain post-licensing requirements, including providing the Office of Commercial Space Transportation with information necessary to enable the United States Government's implementation of article IV of the Convention on Registration of Objects Launched into Outer Space (General Assembly resolution 3235 (XXIX), annex) and complying with the financial responsibility requirements specified in the licence. The basis for these financial responsibility requirements are set out in sections 70112 and 70113 of the codified Commercial Space Launch Act and Federal Regulations 14 CFR part 440. Essentially, for every launch or re-entry licence issued or transferred, the licensee or transferee is required to obtain liability insurance or demonstrate financial responsibility in amounts to compensate for the maximum probable loss for claims by third parties for death, bodily injury or property damage or loss resulting from activity carried out under the licence; and the United States Government for damage or loss of government property resulting from activity carried out under the licence. The amounts required to compensate for maximum probable loss are determined in the case of each licence by the Office of Commercial Space Transportation, up to a maximum of $500 million ($100 million for claims by the United States Government) or the maximum liability insurance available on world markets. Any claims exceeding the determined amounts are payable by the United States

Government on behalf of the licensee up to a statutory maximum, which is currently set at $1,500 million. Licensees for the operation of launch and re-entry sites are not subject to this financial responsibility requirement. Additionally, all launch and re-entry licensees are required to enter into reciprocal waiver of claims arrangements with their contractors, subcontractors and customers and contractors and subcontractors of their customers involved in the launch or re-entry services under which each party agrees to be responsible for any claims for damage or loss sustained by its own employees.

70. Various measures are provided within the codified Commercial Space Launch Act to ensure licensee compliance. Section 70106 requires a licensee to allow the Secretary of Transportation to place an officer or employee of the United States Government or another individual as an observer at a launch site or re-entry site the licensee uses, at a production facility or assembly site a contractor of the licensee uses to produce or assemble a launch or re-entry vehicle or at a site at which a payload is integrated with a launch or re-entry vehicle. The observer is responsible for monitoring the activity of the licensee or contractor to ensure compliance with the licence and applicable laws and regulations. Section 70107 provides for the modification, suspension and revocation of licences by the Secretary on his own initiative, by application of the licensee, in the case of non-compliance by the licensee, or where the suspension or revocation is necessary to protect the public health and safety, safety of property and national security and foreign policy interests of the United States. Similarly, under section 70108, the Secretary may prohibit, suspend or end immediately any licensed launch of a launch vehicle, operation of a launch site or re-entry site or re-entry of a re-entry vehicle if he or she decides that such launch, operation or re-entry is detrimental to public health and safety, the safety of property or a national security or foreign policy interest of the United States. Section 70115 further grants the Secretary lawful powers of investigation, search and seizure in order to carry out his or her duties, as well as the power to impose civil penalties for any violation of the laws, regulations or terms of licences falling within the scope of his or her responsibilities. Actions and decisions taken by the Secretary are subject to administrative hearings and ultimately to judicial review in accordance with section 70110.

71. In addition to the licensing requirements and activities of the Office of Commercial Space Transportation discussed above, it should be noted that two other agencies of the United States Government are responsible for authorizing through licensing procedures certain activities of non-governmental entities in outer space. The first of those agencies is the Federal Communications Commission, established in accordance with the Communications Act of 1934, 47 USC 151 et seq. (as amended). Part 25.102 of the Federal Regulations, promulgated by the Commission under that Act, states that no person shall use or operate apparatus for the transmission of energy or communications or signals by space or Earth stations except under, and in accordance with, an appropriate authorization granted by the Federal Communications Commission. The objectives of the authorization requirement are to enable both domestic and international coordination of satellite communications activities and to provide protection from impermissible levels of interference to the reception of signals by Earth stations in the fixed satellite service from terrestrial stations in a co-equally shared band. Applications are made directly to the Commission under conditions and with such accompanying information as are determined by it. Licences, or their modifications or renewals, are granted by the Commission if, upon examination of the application, any pleading or objections filed against the application, and upon consideration of such other matters (e.g. national policy) as it may officially notice, the Commission finds that the applicant is legally, technically and otherwise qualified, that the proposed facilities and operations comply with all applicable rules, regulations and policies and that grant of the application will serve the public interest, convenience and necessity.

72. Finally, the Secretary of Commerce, in accordance with the Land Remote Sensing Policy Act of 1992, 15 USC 5601 et seq. (as amended, inter alia, by the Commercial Space Act of 1998), and with the assistance of the National Oceanic and Atmospheric Administration, is responsible for the authorization and licensing of private remote sensing space systems. As indicated in section 5622 of the codified Act, the purpose of the licensing requirement is to ensure that persons subject to the jurisdiction or control of the United States comply, inter alia, with requirements to operate private remote sensing space systems in such a manner as to preserve the national security of the

United States and to observe its international obligations; to make available to the Government of any country (including the United States) unenhanced data collected by the system concerning the territory under jurisdiction of such Government as soon as such data are available and on reasonable terms and conditions; to make certain designated unenhanced data available to all users without preference, bias or any other special conditions; upon termination of operations, to make disposition of any satellites in space in a manner satisfactory to the President; to furnish the Secretary of Commerce with complete orbit and data collection characteristics of the system and to inform of any deviation therefrom; and to notify the Secretary of Commerce of any significant or substantial agreement the licensee intends to enter with a foreign nation, entity or consortium involving foreign nations or entities. In carrying out this responsibility, the Secretary of Commerce is vested with various administrative and regulatory authorities, including the abilities to grant, transfer, condition, modify or revoke such licences, as well as powers of investigation, search and seizure and the provision of civil penalties for non-compliance by licensees. Actions and decisions of the Secretary are subject to administrative hearings and judicial review.

Notes

[1] "Launch activities in Japan", presented by Chikara Iikura of the Science and Technology Agency of Japan (see A/AC.105/C.2/2000/CRP.12, pp. 31-33).

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Item 8 of the provisional agenda*
Consideration of the draft convention of the International Institute for the Unification of Private Law (Unidroit) on international interests in mobile equipment and the preliminary draft protocol thereto on matters specific to space property

Draft Convention of the International Institute for the Unification of Private Law on international interests in mobile equipment and the preliminary draft protocol thereto on matters specific to space property

Report of the Secretariat and the secretariat of the International Institute for the Unification of Private Law

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I. Introduction

1. At its forty-third session, in 2000, the Committee on the Peaceful Uses of Outer Space agreed on the inclusion of a new single issue/item for discussion in the agenda of the Legal Subcommittee for its fortieth session in 2001, entitled "Consideration of the draft convention of the International Institute for the Unification of Private Law (Unidroit) on international interests in mobile equipment and the preliminary draft protocol thereto on matters specific to space property". The Committee also agreed that the Secretariat and Unidroit should be requested to prepare a report on the convention and space property protocol that would provide background information for discussion of the item by the Legal Subcommittee.[1]

2. The present report has been prepared jointly by the Secretariat and the secretariat of Unidroit in response to the above-mentioned request.

II. Proposed new international regime of the International Institute for the Unification of Private Law governing the taking of security in space property

A. Origins

3. The origins of Unidroit's efforts for the preparation of a new international regime governing the taking of security in high-value mobile equipment go back to the adoption of the 1988 Convention on International Financial Leasing.[2] Article 7 of that Convention includes a rule recognizing the enforceability of the lessor's real rights against the trustee in bankruptcy and unsecured creditors of his lessee. The success of that approach persuaded Unidroit of the desirability of seeking to extend that principle to the enforceability of security rights in those special categories of high-value mobile equipment which, by reason of the fact that they are of a kind likely to be moving across or beyond national frontiers on a regular basis in the ordinary course of business, do not particularly lend themselves to the application of the *lex rei sitae* for the resolution of disputes concerning the validity, enforceability and priority ranking of such rights.

4. This legal rationale was moreover reinforced by economic reasons. The opportunities for asset-based financing of such categories of equipment have to date been extremely limited because of the evident difficulties lenders face in securing and collecting on such loans. The special advantage of asset-based financing for high-value capital equipment resides in the reduction in costs that follows from the reduction in risk for the financier permitted by his ability to have prompt recourse to the value of the underlying asset in the event of default by the debtor. To take the specific example of space property, those private lenders contemplating lending on the security of a satellite are clearly going to want to find out whether other lenders may already also have claims outstanding against that same asset. Currently, there are no reliable mechanisms available to potential lenders for the screening of such outstanding claims. Failing the development of a centralized recording system for the registration of interests in space property, such a mechanism will not be available to potential lenders. Another practical problem that has hitherto tended to restrict opportunities for the use of asset-based financing in respect of space property arises out of the practical complications involved in repossessing property physically located in Earth orbit in the event of the debtor defaulting.

B. Working procedures of the International Institute for the Unification of Private Law and status of work on the project to date

5. It is a peculiarity of Unidroit's working methods that its preparation of international instruments does not involve the immediate convening of governmental experts but that the basis for such intergovernmental negotiations is first sought in the efforts of study groups manned not by representatives of Governments but by the world's foremost experts in the particular field, drawn from the spheres of both law and practice, sitting in their personal capacity. The results of the efforts of those study groups, in the form of preliminary draft instruments, are then submitted to the Governing Council of Unidroit, study groups being emanations of the Council and chaired by a member of the Council. The purpose of the consideration of these preliminary draft instruments by the Council is to

decide whether it is appropriate to authorize their transmission to Governments with a view to the convening of sessions of experts from such Governments to prepare the texts at an intergovernmental level such that they may be capable of being submitted for adoption as international instruments. In the event that the Council decides to authorize the transmission to Governments of a preliminary draft instrument prepared by a study group, it will then be for the Council, at such time as governmental experts have drawn up a draft instrument on the basis of the preliminary draft, to decide whether the draft instrument in question is sufficiently advanced to warrant the convening of a diplomatic conference for its finalization and adoption as an international instrument.

6. At the time when Unidroit work in this area commenced, in 1993, with the first session of a study group, Unidroit's intention was to prepare a single international instrument capable of covering all the different categories of high-value mobile equipment intended to be covered by the future Convention. At the time it was envisaged that this would embrace not only airframes, aircraft engines and helicopters, containers, oil rigs, railway rolling stock, registered ships and space property but also other categories of uniquely identifiable object.[3]

7. The aircraft industry, representatives of which first became actively involved in the development of the convention in 1994, quickly demonstrated its anxiety to see the future convention enter into force and for it to be able to benefit from its innovations at the earliest possible opportunity. The anxiety on their part was matched by a corresponding reluctance to wait for other industry groups, such as the space industry, to reach the same level of industry consensus as they had achieved regarding the special rules that would be needed to adapt the general rules of the contemplated convention to the special characteristics of each of the different categories of equipment intended to be covered. In 1997, the study group therefore decided to split the future convention into a base convention, carrying the general rules applicable to all the different categories of mobile equipment intended to be covered and separate equipment-specific protocols for each of the different categories, carrying the special rules needed to adapt the general rules of the convention to the special characteristics and requirements of each category of equipment. From that moment on, priority was given to the completion, as a necessary first stage, of the draft Unidroit convention and a draft protocol thereto on matters specific to aircraft equipment (the "draft aircraft protocol").

8. The draft Unidroit convention (to be issued in a conference room paper) and the draft aircraft protocol have already been the subject of a series of intergovernmental meetings sponsored jointly by Unidroit and the International Civil Aviation Organization (ICAO), by reason of its special competence for matters pertaining to international civil aviation. Those texts are now ready for submission to a diplomatic conference of adoption. It has been decided by the Unidroit Governing Council and the Council of ICAO that such a diplomatic conference is to be held in principle in South Africa in May 2001.

9. This notwithstanding, work has nevertheless been pursued continuously over the period since 1997 on the preparation of two other preliminary draft protocols to the draft Unidroit convention, one on railway rolling stock—the preliminary draft protocol on matters specific to railway rolling stock, prepared by the Rail Working Group, has already been approved by the Unidroit Governing Council for transmission to Governments and is to be the subject of a first session of governmental experts in March 2001—and the other on space property. Work on the preliminary draft protocol has been conducted pursuant to the invitation addressed by the President of Unidroit in 1997 to Peter D. Nesgos (Milbank, Tweed, Hadley & McCloy LLP, New York), one of the world's leading experts in the space finance law field, to organize a working group to prepare, for submission to the Unidroit Governing Council, the text of a preliminary draft protocol on matters specific to space property that could be considered representative of industry consensus.

10. The Space Working Group organized and coordinated by Mr. Nesgos has made considerable progress in the preparation of the preliminary draft protocol and anticipates being in a position to submit a text to the Unidroit Governing Council at its eightieth session, to be held in Rome from 17 to 19 September 2001, with a view to that body authorizing its transmission to Governments and the convening of governmental experts to prepare a draft protocol capable of being submitted for adoption as an international instrument. The Space Working Group

brings together expertise from the different parties to commercial space activities, in particular manufacturers, financiers and operators of space property.

11. With a view not only to addressing the outstanding issues left open in the current working draft of the protocol but also to making a preliminary examination of the issues that merit consideration in the context of the relationship between the proposed new international regime for space property and the existing body of space law, Unidroit convened a meeting of an ad hoc restricted informal group of experts in Rome on 18 and 19 October 2000. The meeting was structured in an original way for Unidroit, given the fact that the Unidroit Governing Council has yet to give its authorization to the transmission of the preliminary draft protocol to Governments. Specifically with a view to assisting with deliberations on the matter at the fortieth session of the Legal Subcommittee, in 2001, the meeting brought together both experts designated by those Governments which had already manifested a particular interest in the project during the thirty-ninth and forty-third sessions of the Legal Subcommittee and the Committee on the Peaceful Uses of Outer Space, respectively, and those experts representing the international commercial aerospace and financial communities involved in the work of the Space Working Group.

12. The results of the deliberations of the meeting of the restricted informal group of experts[4] were considered at the subsequent meeting of the Space Working Group, also held in Rome, on 19 and 20 October 2000.[5] The latest working draft of the protocol was prepared in January 2001 by Mr. Nesgos, assisted by Dara A. Panahy (Milbank, Tweed, Hadley & McCloy LLP, Washington, D.C.), in the light of the points made at the meetings of the restricted informal group of experts and the Space Working Group, as well as the amendments to the draft Unidroit convention and the draft aircraft protocol made at the meetings of governmental experts held to consider those texts subsequent to the preparation of the previous working draft of the protocol (to be issued in a conference room paper).

C. Principal features of the proposed new international regime governing the taking of security in space property

1. Draft Convention

13. The method chosen to overcome the legal and economic difficulties identified in paragraphs 3 and 4 above is the creation of a new international interest in mobile equipment. That interest has been defined in such a way as to embrace not only the classic security interest but also what are increasingly recognized as its functional equivalents, the seller's interest under a title retention agreement and the lessor's interest under a leasing agreement. The categories of mobile equipment in which such international interests may be held have been consciously limited to a relatively small number of high-value assets the common feature of which is that they all move regularly across or beyond national frontiers in the ordinary course of business. That restriction was designed to limit the scope for what might otherwise be considered unwarranted interferences with the application of domestic law rules.

14. At the heart of the draft Unidroit convention are the provisions for the creation of what is intended as an autonomous international interest, that is, an interest constituted by the future convention and not derived from or dependent on national law. That interest, if created in accordance with the very simple formalities required by the draft Unidroit convention, will be enforceable against the debtor whether or not it has been registered.

15. The draft Unidroit convention provides holders of international interests with a basic set of default remedies designed to be exercisable expeditiously, a matter adjudged to be of major practical significance for those contemplating lending against such high-value assets.

16. The international interest will be registrable in an international registry to be set up under the draft Unidroit convention. Separate registries are envisaged for each of the categories of equipment covered. Plans are already well advanced for the setting up of an aircraft registry and are under way for the setting up of a rail registry.

17. Registration will be the key to third parties knowing of the existence of international interests and to international interests enjoying priority over any

other interest subsequently registered as over any unregistered interest, international or otherwise. Registration will also be the key to the international interest's validity against the administrator and creditors in the debtor's insolvency.

18. The fact that the international registry is intended to be fully computerized means that it will be possible for a potential lender to make a search from any point in the world and to find out, more or less instantaneously, the precise status of the asset against which he is considering advancing funds. That fact alone explains why the draft Unidroit convention may be expected to make such a major difference to the future pattern of the asset-based financing of high-value mobile equipment.

2. Preliminary draft protocol

19. The future convention is intended to be applicable to space property only as from the time that the relevant State has become a contracting State to the future space property protocol and to the extent that its provisions are not amended by those of the protocol. The latter is intended to implement the future convention as regards all those matters which require special rules in the context of space property.

20. One of the principal functions of each of the protocols to the future Unidroit convention is the precise delimitation of the latter's substantive sphere of application in respect of each category of equipment covered by the same. This is done by means of definitions. The preliminary draft protocol thus provides a definition of space property, which is framed in broad terms so as to embrace, on the one hand, both tangible and intangible property and, on the other, property not necessarily known in the current state of space technology, such as products that might be manufactured in space. The future regime's application beyond mere tangible space property, such as satellites and transponders, was recognized at an early stage as being essential in view of the importance for a financier's ability to obtain constructive repossession of a satellite of his having access to the various rights associated with the operation of that satellite, in particular:

(a) Governmental licences and permits the assignment of which is permissible under national law;

(b) Intangible rights necessary to control, operate or transfer ownership of or rights in a satellite;

(c) Contractual rights relating to the operation of a satellite and the proceeds and revenues derived from the operation of a satellite.

Such associated rights are regarded as being inextricably linked to a satellite and integral to its commercial value.

21. Another important function of the future space property protocol is to provide the means of identification of the space property covered sufficient to serve as search criteria for use in conjunction with the future international registry for such property. While the manufacturer's serial number may be a sufficient search criterion for aircraft equipment—and has indeed been chosen for that purpose in the draft aircraft protocol—it has been recognized that not all items of space property by any means will dispose of such numbers or their equivalent, thus making it necessary to contemplate the possible use of multiple search criteria.

22. The difficulties implicit in exercise of the creditor's basic default remedy under the draft Unidroit convention, namely the taking of physical possession or control, in the context of most types of space property underline the importance of the provision in the preliminary draft protocol of a special additional remedy, namely constructive repossession (consisting of, for example, the exercising of control over space property from the ground via access and command codes).

23. The fact that a given satellite may form an integral part of an entire communications or operational system highlights the importance of the provision in the preliminary draft protocol whereby a creditor is debarred from taking possession or control in a manner that would contravene public order.

24. With a view to enhancing the opportunities for asset-based financing of space property, the preliminary draft protocol also introduces, through an optional insolvency regime, special rules designed to strengthen the creditor's position vis-à-vis the insolvency administrator in the event of the debtor's insolvency.

25. One area where the future space property protocol will need to implement the provisions of the draft Unidroit convention will be in determining the essential nature and framework of the international registration system for space property. The draft convention envisages the establishment or appointment

of a supervising authority, answerable to contracting States, which will enjoy international status and related privileges and immunities and be responsible for the establishment and administration of the international registry. This supervisory authority would also be responsible for the appointment of a registrar, who will carry out the day-to-day management of the registry and ensure its effective operation. It is currently envisaged that the registrar would be liable for compensatory damages for loss suffered by persons directly resulting from an error or omission in the registry and its officers and employees or from a mal-function of the international registration system and would be required to provide insurance or financial guarantees covering such liability. The registrar would also be necessarily subject to a degree of legal process under the national laws of at least one State. Of particular importance will be the identification of the bodies or persons appropriate to exercise the functions of supervisory authority and registrar.

D. Commercial advantages of the proposed new international regime for the financing of space property

26. The raising of the necessary finance for space activity has always caused special problems in view of the significant sums of money involved. Whereas up until 10 years ago most of the customers for such finance were either governmental or intergovernmental agencies or large multinationals or blue-chip companies with a long credit history and well able to raise financing without the need to grant security over their assets, the ever-growing trend towards the commercialization of space that is presently being witnessed has brought with it a change in the profile of the typical customer for space finance. Such customers will now increasingly be entrepreneurial companies with no real credit history and no significant assets to offer as collateral other than a satellite.

27. Such satellites will typically be commercial communication satellites, each of which will range in value from a few million to hundreds of millions of United States dollars and will have launching costs that may well be in excess of $100 million. It is anticipated that more than 1,000 commercial communication satellites, valued at over $5 billion and projected to generate well over $500 billion in revenues, will be launched over the next decade. This clearly represents a unique opportunity for asset-based financing.

28. Although certain international instruments, for instance the aforementioned Unidroit Convention on International Financial Leasing, contain provisions that may affect creditors' interests in space property, none of those instruments effectively deal with the international registration, recognition and enforcement of security rights in such property. Neither do the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies (the "Outer Space Treaty", General Assembly resolution 2222 (XXI), annex) nor the 1975 Convention on Registration of Objects Launched into Outer Space (the "Registration Convention", resolution 3235 (XXIX), annex).

29. Representatives of the space sector, whether satellite manufacturers, launch service providers, satellite operators or financial institutions, represented on the Space Working Group all agree as to the great benefits to be derived from a uniform, predictable and commercially oriented regime governing the taking of security in space property of the kind contemplated by the future convention and space protocol. Firstly, it will increase the willingness of financiers to lend funds for space commercial transactions. Secondly, the cost of such transactions, whether measured in terms of financial, legal or insurance costs, will as a result be much reduced in proportion to the consequential reduction in the financial risk at present incidental to such transactions.

30. The increased availability of asset-based financing for space-related ventures and the reduced cost of such financing that are likely to result from the proposed Unidroit regime may be expected to bring particular benefits for the new type of customers for satellite services, in particular in those developing countries and countries with economies in transition which until now might have experienced limited access to such financing possibilities.

III. Relationship of the proposed new international regime to the existing body of space law

31. Both Unidroit and the Space Working Group have concluded that there is nothing in the preliminary

draft protocol that is necessarily inconsistent with the existing body of space law, in particular the obligations subscribed to by States under the United Nations treaties on outer space. However, they agree as to the desirability of a paragraph being incorporated, say in the preamble to the preliminary draft protocol, ensuring that it in no way conflicts with or supersedes those obligations.

32. In recognition of the potential importance of the issues involved, moreover, the Space Working Group, at its last meeting, decided to set up an informal working group to consider the relationship between the preliminary draft protocol and those international instruments, whether already adopted or in preparation, which might be expected to have an impact on the provisions of the former.[6]

33. There was also extensive discussion of the question during the meeting of the restricted informal group of experts, at which discussions focused on the question from the angle of the interaction of the preliminary draft protocol both with national space law and with international space law.

A. Interaction with national space law

34. The discussions that took place on that occasion highlighted three areas in which the default remedy provisions of the preliminary draft protocol might prove to be a source of difficulty for certain States. Thus, in States where the vast majority of space property belonged to the State, it was to be expected that any attempt by a private party to take possession or control of such property would arouse vigorous opposition on the part of the authorities. Equally, in States that had passed mandatory legislation prohibiting the transfer of technology, in particular military technology, it was likely that the authorities would oppose transfers of such technology to unknown creditors. The third scenario indicated that, where a particular item of space property was required to guarantee a State's provision of a public service, in particular where safety or navigation systems were involved, such a State would probably object to a creditor seeking to take possession or control of such property without the provision of adequate guarantees of the continuing operation thereof under the same conditions and for the same purposes.

35. It was suggested that such difficulties could be resolved by one or other or a combination of two possible solutions. One option would be to permit such States to exclude the application of the protocol in respect of certain types of space property by means of an opt-out clause. The other would be to require such States to compensate the creditor for his losses in cases where the State's interests prevented the exercise of his remedies under the protocol, the idea here being to establish a fair balance between the interests of such States, on the one hand, and those of creditors, on the other.

B. Interaction with international space law

36. The only areas where the restricted informal group of experts was able to identify possible difficulties arising from interaction of the preliminary draft protocol with international space law concerned article II of the Convention on International Liability for Damage Caused by Space Objects (the "Liability Convention", General Assembly resolution 2777 (XXVI), annex) and articles VI and VIII of the Outer Space Treaty.

37. The restricted informal group of experts noted that a launching State could run the risk of finding itself liable under article II of the Liability Convention for a particular space object over which, by virtue of the transfer of that space object to a creditor subject to the jurisdiction and control of another State under the draft Unidroit convention as implemented by the preliminary draft protocol, it was no longer in a position to exercise control. It was noted that the transfer of space property to such creditor could also make it difficult for a State to honour its obligations under articles VI and VIII of the Outer Space Treaty. In that regard, it was noted that such issues were not limited only to creditors under the operation of the preliminary draft protocol, but also arose in connection with any transfer of ownership in space property to nationals of different States.

38. It was further noted that the definition of "space property" in the preliminary draft protocol, which determines the scope of application of the provisions thereof and the creditor remedies contained therein, could cause concern for contracting States seeking to

implement their responsibilities under article VI of the Outer Space Treaty.

39. With a view to being absolutely certain that the provisions of the preliminary draft protocol were wholly compatible with the international obligations subscribed to by States under the Constitution and Convention of the International Telecommunication Union (ITU), and in particular articles 33-48 of the Constitution, dealing, inter alia, with the questions of security of communications by satellite and the access to and use of radio frequencies and any associated orbits, the restricted informal group of experts decided that a questionnaire should be addressed to ITU.

IV. Issues before the Legal Subcommittee

40. Following the presentation made by Martin J. Stanford on behalf of Unidroit at the Workshop on Space Law in the Twenty-first Century, held as part of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)[7] and in the light of the recommendations of UNISPACE III that attention be paid to the various aspects of the issues of liability and security of ownership in order to arrive at a coherent global framework and that the international organizations concerned make arrangements for effective and focused joint forums,[8] both Unidroit and the Space Working Group concluded as to the desirability of the proposed new international regime for space property being brought to the attention of the Committee on the Peaceful Uses of Outer Space, given the responsibility of that Committee for the development of international space law in general and in particular in view of the responsibilities already exercised by the Office for Outer Space Affairs of the Secretariat in respect of the international registry of space objects provided for under articles III and IV of the Registration Convention.

41. Both Unidroit and the Space Working Group likewise believe in principle that the United Nations may be considered the most appropriate body to exercise the important functions of supervisory authority in respect of the future international registry for space property intended to underpin the future space property protocol, all the more so in view of the functions at present being exercised by the Office for Outer Space Affairs under the Registration Convention. The conferring of those functions on an intergovernmental body has to date been seen as an important guarantee of the reputation of the particular international registration system with prospective users. It is worth noting in this context that, at the ninth meeting of its 161st session, held in Montreal, Canada, on 22 November 2000, the ICAO Council agreed that it would in principle be prepared to exercise the functions of supervisory authority in respect of the international registration system underpinning the draft aircraft protocol. The Intergovernmental Organization for International Carriage by Rail (OTIF) has indicated its interest in exercising similar functions in relation to railway rolling stock.

42. Consideration of the proposed new regime by the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee in 2001 is seen by them as being particularly timely in that the preliminary draft protocol is due to be submitted to the Unidroit Governing Council at its forthcoming eightieth session with a view to that body deciding on the next step to be taken in connection with this work and in particular whether it is to be considered ready for transmission to member Governments.

43. Two of the issues concerning the preliminary draft protocol likely to be of importance for the Governing Council's decision are, firstly, the question of its relationship to the existing body of space law and, secondly, that of the body that might be expected to exercise the functions of supervisory authority in the context of the future international registration system for space property. These are both issues which, in the opinion of Unidroit and the Space Working Group, might reasonably be expected to benefit from the particular expertise of the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee.

44. As has been indicated above, both Unidroit and the Space Working Group believe that there is nothing in the preliminary draft protocol that is necessarily inconsistent with the existing body of space law, even if a number of areas worthy of consideration were identified by the restricted informal group of experts. An informal working group of the Space Working Group has been set up to consider the relationship between the preliminary draft protocol and those international instruments which might be expected to

have an impact on its provisions. The opinion of both Unidroit and the Space Working Group is that there can however be no doubt that the relationship between the preliminary draft protocol and the existing body of space law is a question that the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee are particularly well fitted to explore.

45. In the light of the above discussion and taking into account the draft Unidroit convention and the preliminary draft space property protocol contained in the conference room papers, the Legal Subcommittee may wish to consider the following issues during the course of its deliberations on this item:

(a) The relationship of the proposed new international regime to the existing body of space law, including, inter alia, the issues mentioned in section III of the report;

(b) The nature and framework of the international registration system, its supervisory authority and registrar and in particular the identification of bodies or persons appropriate to exercise the functions of such supervisory authority and registrar;

(c) The role of the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee in the future development of the project and in particular the manner and scope of its future interaction with Unidroit in that regard;

(d) The form and manner by which the Legal Subcommittee would transmit its views, findings and/or recommendations with regard to the project to Unidroit and in particular its Governing Council;

(e) The future status of this item on the agenda of the Legal Subcommittee in the light of the deliberations and decisions of the Subcommittee at its fortieth session, in 2001.

Notes

[1] *Official Records of the General Assembly, Fifty-fifth Session, Supplement No. 20* (A/55/20), para. 166.

[2] International Institute for the Unification of Private Law, Ottawa, 1988.

[3] See article 3 of the preliminary draft of the Unidroit convention on international interests in mobile equipment as established in 1997 by the study group at the conclusion of its fourth session and revised in 1998 by a steering and revisions committee (Study LXXII-Doc. 42).

[4] See the report on the meeting prepared by the Unidroit secretariat (Study LXXIIJ-Doc. 1).

[5] See the report on the meeting prepared by the Unidroit secretariat (Study LXXIIJ-Doc. 2).

[6] Ibid., sect. 15.

[7] "Unidroit's project for the creation of a new regimen governing the taking of security in high-value mobile assets: a window of opportunity in the context of the privatization and commercialization of space", a commentary paper delivered during the session of the Workshop on the roles of international organizations in privatization and commercial use of outer space, reproduced in *Proceedings of the Workshop on Space Law in the Twenty-first Century* (ST/SPACE/2 (2000), pp. 148-151).

[8] *Report of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space* (United Nations publication, Sales No. E.00.I.3), para. 370.